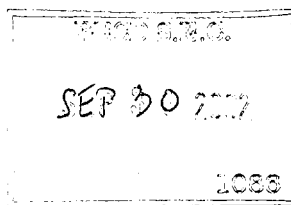




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# BioTime, Inc.

## 2001 Annual Report

## CORPORATE PROFILE

BioTime develops aqueous synthetic solutions for use in a variety of medical applications. The Company's Hextend® plasma volume expander maintains circulatory system fluid volume and oncotic pressure during surgery. Hextend® is marketed in North America by Abbott Laboratories. Products under development at BioTime include other plasma volume expanders, and a blood replacement solution for organ and tissue preservation at very low temperatures. BioTime scientists are currently studying mechanisms of brain aging in order to develop products for geriatric medicine. BioTime common shares trade on the American Stock Exchange under the symbol BTX.



BioTIME, INC.

Dear Shareholder:

BioTime has made significant progress during the past year toward becoming an important member of the world pharmaceutical industry. Hextend® has already become the standard plasma volume expander at a number of our country's most prominent teaching hospitals and leading medical centers. We believe that as the leading U.S. hospitals switch to Hextend, smaller hospitals will follow their lead. We are hopeful that this trend will develop in Canada as well when sales begin there in a few months.

We have been informed that Hextend has been purchased for use by certain U.S. armed forces units deployed overseas, and arrangements have been made to facilitate additional purchases of Hextend by the military and other federal government agencies. Military physicians and researchers are using and evaluating Hextend for the treatment of hypovolemia in combat casualties. A group of military and civilian physicians meeting under the acronym "STORMACT" (Strategies To Reduce Military And Civilian Transfusions) is a major proponent of the efficacy of Hextend.

We remain committed to the growth of our product portfolio. We have four important products in clinical and pre-clinical development. We completed a Phase I clinical trial of PentaLyte® and are planning the next phase in which PentaLyte will be used to treat hypovolemia in surgery. The results of the Phase I trial are scheduled for presentation at the upcoming meeting of the American Society of Anesthesiologists to be held in Orlando, Florida in October 2002.

We are also continuing to develop solutions for low temperature surgery. The use of Hextend in low temperature surgery is discussed in an article appearing in the April 2002 volume of the Canadian Journal of Anesthesia. Drs. David Moskowitz, Aryeh Shander and their colleagues at Engelwood Hospital in New Jersey reported that they exchanged a portion of a patient's blood with Hextend in a procedure known as acute normovolemic hemodilution (ANH). In this technique, which can be very effective in helping patients to avoid transfusion, the patient's own blood is collected while being replaced with a surgical fluid. During and after the surgery, the blood collected is then transfused back. In this case the patient was placed on bypass and his body temperature lowered to 15°C, after about 35% of his blood had been replaced with Hextend. His circulation was then arrested for 27 minutes while a kidney tumor was removed which had grown up into his vena cava and heart. The patient was released from the hospital one week later.

We are continuing work to develop HetaCool™ for use in cardiovascular surgery, trauma treatment, and organ transplantation. HetaCool is a variant of Hextend that we believe has the potential for use in procedures that require very high fluid volumes.

BioTime has initiated a research program using HetaCool in animal models of trauma at the State University of New York Health Science Center in Brooklyn where preliminary laboratory results support the feasibility of using HetaCool to treat subjects following severe hemorrhage. The use of HetaCool at near-freezing temperatures in animal models of cardiovascular surgery is also planned at the Texas Heart Institute in Houston. Meanwhile, BioTime scientists are continuing to do laboratory experiments to develop techniques for using Hextend in conjunction with its proprietary hyperbaric chamber to treat acute blood loss due to trauma.

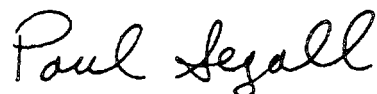
A paper describing the use of our experimental freeze-preservation fluid, consisting of HetaCool to which we have added freeze-protective compounds, has been accepted for publication and is scheduled to appear in a peer-reviewed medical journal in October 2002. This solution, which we call HetaFreeze™, was used to replace the blood of cooled rats. Certain large arteries were surgically harvested from these rats, frozen to liquid nitrogen temperatures, and after a storage period, thawed and transplanted to other rats. These arteries were found to be patent after as long as four months following transplantation. Stored, deep-frozen arterial grafts may be of value in treating certain kinds of vascular disease when autologous transplants are not readily available. Previous work by BioTime scientists has shown that full thickness skin grafts from rats can be harvested after perfusion with HetaFreeze in situ and frozen, stored and then transplanted to other rats. Some of these grafts lasted for months without rejection.

BioTime scientists working with faculty members and students on the campus of the University of California at Berkeley continue to make progress in their study of the cellular basis of brain aging. Methods for identifying key populations of brain neurons have been developed, and a computerized approach to the automated detection of age-related changes in these populations has been implemented. The goal of this research is to develop proprietary therapies to deal with fundamental aspects of brain aging and neural pathology in elderly patients. BioTime has filed for patent protection for its technology focused on the repair and replacement of tissues lost to disease or aging.

On the financial front, BioTime netted more than \$1.8 million through a private placement of common shares that was completed in August 2002. Those funds will give substantial support to the continuation of BioTime's product development program.

I thank you all for your support, especially in these challenging times, and look forward to your further participation in helping BioTime achieve the great success that we all expect.

Sincerely,

A handwritten signature in cursive script that reads "Paul Segall". The signature is written in dark ink and is positioned below the word "Sincerely,".

Paul Segall, Ph.D.  
Chairman and Chief Executive Officer  
September 24, 2002

**SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549

**FORM 10-K/A-1**

**X ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE  
SECURITIES EXCHANGE ACT OF 1934**

**For the fiscal year ended December 31, 2001**

**OR**

**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE  
SECURITIES EXCHANGE ACT OF 1934**

**For the transition period from \_\_\_\_\_ to \_\_\_\_\_**

**Commission file number 1-12830**

**BioTime, Inc.**

**(Exact name of registrant as specified in its charter)**

**California**  
**(State or other jurisdiction of  
incorporation or organization)**

**94-3127919**  
**(I.R.S. Employer  
Identification No.)**

**935 Pardee Street, Berkeley, California**  
**(Address of principal executive offices)**

**94710**  
**(Zip Code)**

**Registrant's telephone number, including area code (510) 845-9535**

**Securities registered pursuant to Section 12(b) of the Act:**

**Common Shares, no par value**  
**(Title of Class)**

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes X No     

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. [X]

The approximate aggregate market value of voting stock held by nonaffiliates of the registrant was \$31,118,452 as of March 25, 2002. Shares held by each executive officer and director and by each person who beneficially owns more than 5% of the outstanding Common Shares have been excluded in that such persons may under certain circumstances be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

**11,627,316**

**(Number of Common Shares outstanding as of March 7, 2002)**

**Documents Incorporated by Reference**

**None**

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## PART I

*Statements made in this Form 10-K that are not historical facts may constitute forward-looking statements that are subject to risks and uncertainties that could cause actual results to differ materially from those discussed. Words such as "expects," "may," "will," "anticipates," "intends," "plans," "believes," "seeks," "estimates," and similar expressions identify forward-looking statements. See "Risk Factors" and Note 1 to Financial Statements.*

### Item 1. Description of Business

#### Overview

BioTime, Inc. (the "Company" or "BioTime") is a development stage company engaged in the research and development of synthetic solutions that can be used as blood plasma volume expanders, blood replacement solutions during hypothermic (low temperature) surgery, and organ preservation solutions. Plasma volume expanders are used to treat blood loss in surgical or trauma patients until blood loss becomes so severe that a transfusion of packed red blood cells or other blood products is required. The Company is also developing a specially formulated hypothermic blood substitute solution that would have a similar function and would be used for the replacement of very large volumes of a patient's blood during cardiac surgery, neurosurgery and other surgeries that involve lowering the patient's body temperature to hypothermic levels.

The Company's first product, Hextend®, is a physiologically balanced blood plasma volume expander, for the treatment of hypovolemia. Hypovolemia is a condition often associated with blood loss during surgery or from injury. Hextend maintains circulatory system fluid volume and oncotic pressure and keeps vital organs perfused during surgery. Hextend, approved for use in major surgery, is the only blood plasma volume expander that contains hetastarch, buffer, multiple electrolytes and glucose. Hextend is designed to compete with and to replace products such as albumin and other colloid solutions, as well as crystalloid solutions, that have been used to maintain fluid volume and blood pressure during surgery. Hextend is also completely sterile to avoid risk of infection. Health insurance reimbursements and HMO coverage now include the cost of Hextend used in surgical procedures.

Hextend is being sold in the United States by Abbott Laboratories under an exclusive license from the Company. Abbott also has the right to sell Hextend in Canada, where an application for marketing approval is pending. Abbott also has a right to obtain licenses to manufacture and sell other BioTime products. See "Licensing" for more information about the license granted to Abbott Laboratories.

As part of the marketing program, a number of studies have been conducted that show the advantages of receiving Hextend and other BioTime products during surgery. For example, the results of a clinical trial by NJ Wilkes et al performed in England and entitled "The effects of balanced versus saline-based hetastarch and crystalloid solutions on acid-base and electrolyte status and gastric mucosal perfusion in elderly surgical patients" was published in the October 2001 edition of *Anesthesia and Analgesia*, and underscores a number of Hextend benefits including maintenance of normal acid-base balance, blood calcium and chloride levels and perfusion of portions of the gastro-intestinal tract. As future studies such as these are completed, the results will be presented

at medical conferences and articles will be written for publication in medical journals. The Company is also aware of independent studies using Hextend that are being conducted which may be published in medical journals or reported at medical conferences. The outcome of future medical studies and timing of the publication or presentation of the results could have an effect on Hextend sales.

Hextend has been approved, or is being considered for approval, by hundreds of hospital formulary committees. Inclusion on hospital formularies is important because it enables physicians to obtain Hextend without the need to special order it. Obtaining formulary approval generally takes several months and often requires diligent efforts.

The Company is also developing two other blood volume replacement products, PentaLyte,<sup>®</sup> and HetaCool,<sup>™</sup> that, like Hextend,<sup>®</sup> have been formulated to maintain the patient's tissue and organ function by sustaining the patient's fluid volume and physiological balance. Various colloid and crystalloid products are being marketed by other companies for use in maintaining patient fluid volume in surgery and trauma care, but those solutions do not contain the unique comprehensive combination of electrolytes, glucose, lactate and hydroxyethyl starch found in Hextend, PentaLyte, and HetaCool. The Company's products do not contain albumin. Albumin produced from human plasma is also currently used as a plasma expander, but it is expensive and subject to supply shortages.

Based upon the results of its clinical studies and laboratory research, the Company has determined that in many emergency care and surgical applications it is not necessary for a plasma volume expander to include special oxygen carrying molecules to replace red blood cells. Therefore, the Company is developing formulations that do not use costly and potentially toxic oxygen carrying molecules such as synthetic hemoglobin and perfluorocarbons. However, recent laboratory findings by Company scientists suggest that Hextend can allow hemoglobin-based oxygen carrier solutions to be used more effectively.

In order to commence clinical trials for regulatory approval of new products, such as PentaLyte and HetaCool, or new therapeutic uses of Hextend, it will be necessary for the Company to prepare and file with the FDA an Investigational New Drug Application ("IND") or an amendment to expand the present IND for additional Hextend studies. Filings with foreign regulatory agencies will be required to commence clinical trials overseas.

BioTime has completed a Phase I clinical trial of PentaLyte involving a small number of subjects and has submitted its findings to the FDA. BioTime plans to test PentaLyte for the treatment of hypovolemia in surgery. PentaLyte contains a lower molecular weight hydroxyethyl starch than Hextend, and is more quickly metabolized. PentaLyte is designed for use when short lasting volume expansion is desirable.

BioTime is also continuing to develop solutions for low temperature surgery and trauma care. A number of physicians have reported using Hextend to treat hypovolemia under mild hypothermic conditions during cardiac surgery. Additional cardiac surgeries have been performed at deeper hypothermic temperatures. In one case, Hextend was used to treat hypovolemia in a cancer patient operated on under deep hypothermic conditions in which the heart was arrested. Once a sufficient amount of data from successful low temperature surgery has been compiled, the Company plans to seek permission to conduct trials using Hextend as a complete replacement for blood under near-



freezing conditions. BioTime currently plans to market Hextend for complete blood volume replacement at very low temperatures under the registered trade mark "HetaCool®" after FDA approval is obtained.

The cost of preparing regulatory filings and conducting clinical trials is not presently determinable, but could be substantial. It may be necessary for the Company to obtain additional funds in order to complete any clinical trials that it may conduct for its new products or for new uses of Hextend.

In addition to developing clinical trial programs, the Company plans to continue to provide funding for its laboratory testing programs at selected universities, medical schools and hospitals for the purpose of developing additional uses of Hextend, PentaLyte, HetaCool, and other new products, but the amount of research that will be conducted at those institutions will depend upon the Company's financial status.

The Company was incorporated under the laws of the State of California on November 30, 1990. The Company's principal office is located at 935 Pardee Street, Berkeley, California 94710. Its telephone number at such office is (510) 845-9535.

Hextend® and PentaLyte® are registered trademarks, and HetaCool™ is a trademark, of BioTime, Inc.

## **Products for Surgery, Plasma Volume Replacement and Emergency Care**

### *The Market for Plasma Volume Expanders*

The Company is developing Hextend, PentaLyte, HetaCool and other synthetic plasma expander solutions to treat acute blood loss that occurs as a result of trauma injuries and during many kinds of surgery. These products are synthetic, can be sterilized, and can be manufactured in large volumes. Hextend, PentaLyte, and HetaCool contain constituents that may maintain physiological balance when used to replace lost blood volume.

Hextend is also currently being used to treat hypovolemia subsequent to trauma or sepsis by emergency room physicians. After appropriate clinical testing and regulatory approval, it may be used by paramedics to treat acute blood loss in trauma victims being transported to the hospital. Hextend has also been purchased by the United States armed forces and may be used in cases of battlefield trauma.

Approximately 10,000,000 surgeries take place in the United States each year, and blood transfusions are required in approximately 3,000,000 of those cases. Transfusions are also required to treat patients suffering severe blood loss due to traumatic injury. Many more surgical and trauma cases do not require blood transfusions but do involve significant bleeding that can place the patient at risk of suffering from shock caused by the loss of fluid volume (hypovolemia) and physiological balance. Whole blood and packed red cells generally cannot be administered to a patient until the patient's blood has been typed and sufficient units of compatible blood or red cells can be located. Periodic shortages of supply of donated human blood are not uncommon, and rare blood types are

often difficult to locate. The use of human blood products also poses the risk of exposing the patient to blood borne diseases such as AIDS and hepatitis.

Due to the risks and cost of using human blood products, even when a sufficient supply of compatible blood is available, physicians treating patients suffering blood loss are generally not permitted to transfuse red blood cells until the patient's level of red blood cells has fallen to a level known as the "transfusion trigger." During the course of surgery, while blood volume is being lost, the patient is infused with plasma volume expanders to maintain adequate blood circulation. During the surgical procedure, red blood cells are not generally replaced until the patient has lost approximately 45% to 50% of their red blood cells, thus reaching the transfusion trigger at which point the transfusion of red blood cells may be required. After the transfusion of red blood cells, the patient may continue to experience blood volume loss, which will be replaced with plasma volume expanders. Even in those patients who do not require a transfusion, physicians routinely administer plasma volume expanders to maintain sufficient fluid volume to permit the available red blood cells to circulate throughout the body and to maintain the patient's physiological balance.

Several units of fluid replacement products are often administered during surgery. The number of units will vary depending upon the amount of blood loss and the kind of plasma volume expander administered. Crystalloid products must be used in larger volumes than colloid products such as Hextend. Albumin produced from human plasma can be used for this purpose, but it is expensive and subject to supply shortages. Additionally, an FDA warning has cautioned physicians about the risk of administering albumin to seriously ill patients.

#### *The Market for Products for Hypothermic Surgery*

During 1997, more than 500,000 coronary bypass and other open heart surgeries were performed in the United States annually. Approximately 18,000 aneurysm surgeries and 4,000 arterio-venous malformation surgeries were performed in the United States during 1989. Current estimates indicate that more than 1,000,000 people over age 55 have pathological changes associated with aortic arch aneurysms. Open heart procedures often require the use of cardio-pulmonary bypass equipment to do the work of the heart and lungs during the surgery. During open heart surgery and surgical procedures for the treatment of certain cardiovascular conditions such as large aneurysms, cardiovascular abnormalities and damaged blood vessels in the brain, surgeons must temporarily interrupt the flow of blood through the body. Interruption of blood flow can be maintained only for short periods of time at normal body temperatures because many critical organs, particularly the brain, are quickly damaged by the resultant loss of oxygen. As a result, certain surgical procedures are performed at low temperatures because lower body temperature helps to minimize the chance of damage to the patient's organs by reducing the patient's metabolic rate, thereby decreasing the patient's needs during surgery for oxygen and nutrients which normally flow through the blood.

Current technology limits the degree to which surgeons can lower a patient's temperature and the amount of time the patient can be maintained at a low body temperature because blood, even when diluted, cannot be circulated through the body at near-freezing temperatures. As a result, surgeons face severe time constraints in performing surgical procedures requiring blood flow interruption, and those time limitations prevent surgeons from correcting certain cardiovascular abnormalities.

Hypothermic techniques may also have an important use in treating trauma patients that have experienced severe blood loss. BioTime is sponsoring a new project at the State University of New York Health Sciences Center in Brooklyn to study hypothermia and complete blood volume replacement with HetaCool in an animal model of civilian trauma.

#### *Hextend, PentaLyte and HetaCool*

The Company's first three blood volume replacement products, Hextend, PentaLyte, and HetaCool have been formulated to maintain the patient's tissue and organ function by sustaining the patient's fluid volume and physiological balance. Hextend, PentaLyte, and HetaCool, are composed of a hydroxyethyl starch, electrolytes, sugar and a buffer in an aqueous base. Hextend and HetaCool use a high molecular weight hydroxyethyl starch (hetastarch) whereas PentaLyte uses a lower molecular weight hydroxyethyl starch (pentastarch). The hetastarch is retained in the blood longer than the pentastarch, which may make Hextend and HetaCool the products of choice when a larger volume of plasma expander or blood replacement solution for low temperature surgery is needed or where the patient's ability to restore his own blood proteins after surgery is compromised. PentaLyte, with pentastarch, would be eliminated from the blood faster than Hextend and HetaCool and might be used when less plasma expander is needed or where the patient is more capable of quickly restoring lost blood proteins. The Company has also tested HexaLyte, a new plasma volume expander that contains a low molecular weight hydroxyethyl starch and that would be eliminated from the body more rapidly than Hextend and HetaCool, but not as rapidly as PentaLyte. BioTime believes that by testing and bringing these products to the market, it can increase its market share by providing the medical community with solutions to match patients' needs.

Certain clinical test results indicate that Hextend is effective at maintaining blood calcium levels when used to replace lost blood volume. Calcium can be a significant factor in regulating blood clotting and cardiac function. Clinical studies have also shown that Hextend maintains acid-base better than saline-based surgical fluids. The Company expects that PentaLyte will also be able to maintain blood calcium levels and acid-base balance based upon laboratory studies and the fact that the formulation of PentaLyte is similar to that of Hextend.

BioTime has not attempted to synthesize potentially toxic and costly oxygen carrying molecules such as hemoglobin because the loss of fluid volume and physiological balance may contribute as much to shock as the loss of the oxygen carrying component of the blood. Surgical and trauma patients are routinely given supplemental oxygen and retain a substantial portion of their own red blood cells. Whole blood or packed red blood cells are generally not transfused during surgery or in trauma care until several units of plasma volume expanders have been administered and the patient's hematocrit has fallen to the transfusion trigger. Therefore, the lack of oxygen carrying molecules in the Company's solutions should not pose a significant contraindication to use.

However, BioTime scientists have conducted laboratory animal experiments in which they have shown that Hextend can be successfully used in conjunction with a hemoglobin-based oxygen carrier solution approved for veterinary purposes to completely replace the animal's circulating blood volume without any subsequent transfusion and without the use of supplemental oxygen. By diluting these oxygen carrier solutions, Hextend may reduce the potential toxicity and costs associated with the use of those products. Once such solutions have received regulatory approval and become commercially available, this sort of protocol may prove valuable in markets in parts of the

developing world where the blood supply is extremely unsafe. These applications may also be useful in combat where logistics make blood use impracticable.

**Hextend** is BioTime's proprietary hetastarch-based synthetic blood plasma volume expander, designed especially to treat hypovolemia in surgery where patients experience significant blood loss. An important goal of the Hextend development program was to produce a product that can be used in multi-liter volumes. The safety related secondary endpoints targeted in the U.S. clinical study included those involving coagulation. The Company believes that the low incidence of adverse events related to blood clotting in the Hextend patients demonstrates that Hextend may be safely used in amounts exceeding 1.5 liters. An average of 1.6 liters of Hextend was used in the Phase III clinical trials, with an average of two liters for patients who received transfused blood products. Since then, more than a quarter million units (500 ml. bags) have been sold for commercial purposes, and the use of quantities of 7 to 8 liters per patient have been reported. There have been no serious adverse events directly related to the use of Hextend even when used in these large volumes.

Hextend is also being used in surgery with cardio-pulmonary bypass circuits. In order to perform heart surgery, the patient's heart must be stopped and a mechanical apparatus is used to oxygenate and circulate the blood. The cardio-pulmonary bypass apparatus requires a blood compatible fluid such as Hextend to commence and maintain the process of diverting the patient's blood from the heart and lungs to the mechanical oxygenator and pump. In a recent clinical trial, cardiac surgery patients treated with Hextend, maintained more normal kidney function, experienced less pain and nausea, showed no deep venous thromboses, avoided dialysis, and had shorter delay times to first meal compared to those treated with other fluids.

**PentaLyte** is BioTime's proprietary pentastarch-based synthetic plasma expander, designed especially for use when a faster elimination of the starch component is desired and acceptable. Although Hextend can be used in these cases, some physicians appear to prefer a solution which could be metabolized faster and excreted earlier when the longer term protection provided by Hextend is not required. PentaLyte combines the physiologically balanced Hextend formulation with pentastarch that has a lower molecular weight and degree of substitution than the hetastarch used in Hextend. Plasma expanders containing pentastarch are currently widely used around the world. BioTime has completed its Phase I clinical study and is planning more advanced PentaLyte clinical trials. BioTime's present plan is to seek approval of PentaLyte for use in the treatment of hypovolemia.

Abbott has certain rights of first refusal to obtain a license to manufacture and market PentaLyte in the United States and Canada.

**HetaCool** is a modified formulation of Hextend. HetaCool is specifically designed for use at low temperatures. Surgeons are already using a variety of other solutions to carry out certain limited procedures involving shorter term (up to nearly one hour) arrest of brain and heart function at temperatures between 15° and 25° C. However, BioTime is not aware of any fluid currently used in medical practice or any medically-approved protocol allowing operations which can completely replace all of a patient's blood at temperatures close to the ice point. The Company believes that very low temperature bloodless surgical techniques could be developed for open heart and minimally invasive closed chest cardiovascular surgeries, removal of tumors from and the repair of aneurysms in the brain, heart, and other areas, as well as in the treatment of trauma, toxicity and cancer.

The Company is in the process of preparing an amendment to its Hextend IND application to conduct clinical trials using HetaCool as a solution to replace all of a patient's circulating blood volume during profound hypothermic (carried out at near-freezing temperatures) surgical procedures. The experimental protocol for the planned blood replacement clinical trial is being tested on animal subjects. HetaCool would be introduced into the patient's body during the cooling process. Once the patient's body temperature is nearly ice cold, and heart and brain function are temporarily arrested, the surgeon would perform the operation. During the surgery, HetaCool may be circulated throughout the body in place of blood, or the circulation may be arrested for a period of time if an interruption of fluid circulation is required. Upon completion of the surgery, the patient would be slowly warmed and blood would be transfused.

Cardiac surgeons are working to develop innovative procedures to repair damaged coronary arteries and heart valves. If optically guided surgical instruments can be inserted into the heart through blood vessels or small incisions, there may be no need to open the patient's chest cavity. BioTime believes that HetaCool may be useful in these minimally invasive closed chest cardiac procedures because the solution is transparent and if it were used to completely replace blood at low temperatures it would permit surgeons to use their optically guided instruments inside the heart or blood vessels without having their view obstructed by blood. The use of BioTime's solutions may also allow better control over stopping and starting the heart, as well as extending the time period of such surgeries.

HetaCool has been used to completely replace the blood volume of hamsters, dogs, pigs, and baboons at temperatures approaching freezing. Many of these animal subjects survived long term after hypothermic blood substitution with HetaCool. In these laboratory tests, the animals' blood was replaced by HetaCool and they were chilled for one to more than four hours with deep body temperatures between 1°C and 10°C.

BioTime has recently launched a research program using HetaCool in animal models of trauma at the State University of New York Health Science Center in Brooklyn. Preliminary laboratory results there have already supported the feasibility of using HetaCool to treat subjects following severe hemorrhage. The use of HetaCool at near-freezing temperatures also will be studied in animal models of cardiovascular surgery at the Texas Heart Institute in Houston. The project has been approved by the appropriate internal committees, and is awaiting the beginning of experimentation.

BioTime is developing a new formulation that has allowed the revival of hamsters after as long as 6.5 hours of hypothermic blood substitution during which time the animals' heartbeat and circulation were stopped.

Abbott has certain rights of first refusal to obtain a license to manufacture and market HetaCool in the United States and Canada.

## Organ Transplant Products

### *The Market for Organ Preservation Solutions*

Organ transplant surgery is a growing field. Each year in the United States, approximately 5,000 donors donate organs, and approximately 5,000 people donate skin, bone and other tissues. As more surgeons have gained the necessary expertise and surgical methods have been refined, the number of transplant procedures has increased, as has the percentage of successful transplants. Organ transplant surgeons and their patients face two major obstacles, namely the shortage of available organs from donors, and the limited amount of time that a transplantable organ can be kept viable between the time it is harvested from the donor and the time it is transplanted into the recipient.

The scarcity of transplantable organs makes them too precious to lose and increases the importance of effective preservation technology and products. Current organ removal and preservation technology generally requires multiple preservation solutions to remove and preserve effectively different groups of organs. The removal of one organ can impair the viability of other organs. Available technology does not permit surgeons to keep the remaining organs viable within the donor's body for a significant time after the first organ is removed. Currently, an organ available for transplant is flushed with an ice cold solution during the removal process to deactivate the organ and preserve its tissues, and then the organ is transported on ice to the donee. The ice cold solutions currently used, together with transportation on ice, keep the organ healthy for only a short period of time. For example, the storage time for hearts is limited to approximately six hours. Because of the short time span available for removal and transplant of an organ, potential organ donees may not receive the needed organs.

BioTime is seeking to address this problem by developing a more effective organ preservation solution that will permit surgeons to harvest all transplantable organs from a single donor. The Company believes that preserving the viability of all transplantable organs and tissues simultaneously, at low temperatures, would extend by several hours the time span in which the organs can be preserved prior to transplant.

**Using HetaCool for Multi-Organ Preservation.** The Company is seeking to develop HetaCool for use as a single solution that can simultaneously preserve all of a single donor's organs. When used as an organ preservation solution, HetaCool would be perfused into the donor's body while the body is chilled, thereby eliminating an undesirable condition called "warm ischemia," caused when an organ is warm while its blood supply is interrupted. The use of HetaCool in conjunction with the chilling of the body should help to slow down the process of organ deterioration by a number of hours so that a surgeon can remove all organs for donation and transplant. The Company's current estimates are that each such preservation procedure could require as much as 50 liters of HetaCool.

The Company believes that the ability to replace an animal's blood with the Company's HetaCool solution, to maintain the animal at near freezing temperatures for several hours, and then revive the animal, would demonstrate that the solution could be used for multi-organ preservation. Company scientists have revived animals after more than six hours of cold blood-substitution, and have observed heart function in animals maintained cold and blood-substituted for more than eight

hours. An objective of the Company's research and development program is to extend the time span in which animal subjects can be maintained in a cold, blood-substituted state before revival or removal of organs for transplant purposes. Organ transplant procedures using animal subjects could then be conducted to test the effectiveness of Hextend as an organ preservative.

A successful transplant of a lung cooled inside the donor's body prior to transplant has recently been reported in Sweden. The patient who received the lung is reported to be doing well several months later. The success of that transplant, which did not involve the use of a BioTime product, involved the preservation and transplant of a single organ, but indicates that hypothermic techniques can be used to preserve organs in the donor prior to removal for transplant.

### *Long-term Tissue and Organ Banking*

The development of marketable products and technologies for the preservation of tissues and vital organs for weeks and months is a long-range goal of the Company's research and development plan. To permit such long-term organ banking the Company is attempting to develop products and technologies that can protect tissues and organs from the damage that occurs when human tissues are subjected to subfreezing temperatures.

**HetaFreeze** is one of a family of BioTime's freeze-protective solutions which may ultimately allow the extension of time during which organs and tissues can be stored for future transplant or surgical grafting. In laboratory experiments, BioTime's proprietary freeze-protective compounds have already been used to preserve skin when used as a whole animal perfusate. Silver dollar size full thickness shaved skin samples have been removed after saturation with HetaFreeze solution, frozen at liquid nitrogen temperatures and stored for periods ranging from days to weeks. The grafts were then warmed and sewn onto the backs of host animals. Many of these grafts survived.

In other laboratory experiments, BioTime scientists have shown that animals can be revived to consciousness after partial freezing with their blood replaced by HetaFreeze. While this technology has not developed to an extent that allows long term survival of the laboratory subjects, and their organs, a better understanding of the effects of partial freezing could allow for extended preservation times for vital organs, skin and blood vessels.

### **Other Potential Uses of BioTime Solutions**

Isolated regional perfusion of anti-cancer drugs has been used to treat melanoma of the limbs, and inoperable tumors of the liver. The Company believes that employing such a procedure while the patient is kept in ice-cold blood-substitution may allow high doses of toxic anti-cancer drugs to be directed at inoperable tumors within vital organs, which would selectively be warmed. Keeping the rest of the patient in a cold, blood substituted state may reduce or eliminate the circulation of the toxic drugs to healthy tissues.

BioTime considers such surgical techniques to be a longer range goal of its research and development program for hypothermic surgery products. Use of this complex technology in the practice of oncology can occur only after ice-cold blood-substitution has advanced to an appropriate level of safety and effectiveness.

## Research and Development Strategy

From inception through December 31, 2001, the Company has expensed \$21,630,518 on research and development. The greatest portion of BioTime's research and development efforts have been devoted to the development of Hextend, PentaLyte and HetaCool for conventional surgery, emergency care, low temperature surgery, and multi-organ preservation. A lesser portion of the Company's research and development efforts have been devoted to developing solutions and protocols for storing organs and tissues at subfreezing temperatures. In the future the Company may explore other applications of its products and technologies, including cancer chemotherapy. As the first products achieve market entry, more effort will be expended to bring the next tier of products to maturity.

A major focus of the Company's research and development effort has been on products and technology to significantly reduce or eliminate the need for blood products in surgery and trauma care. The Company has recently conducted preliminary studies using Hextend in a pressurized oxygen environment and found that Hextend can replace nearly all, or in some cases all, of the circulating blood of rats. Some of the rats were able to live long term without a subsequent transfusion, while others received their own blood back. In other cases, Hextend was used in large volumes in association with a hemoglobin-based oxygen carrier solution approved for veterinary use. When used in this way, rats were able to live long term after all their circulating blood was replaced at normal body temperature breathing room air.

In still other experiments, rats were allowed to lose approximately half their circulating blood volume, and then allowed to develop and remain in respiratory arrest from 10-18 minutes. They were then resuscitated with Hextend and either ventilated with 100% oxygen, or in a hyperbaric oxygen chamber containing 100% oxygen at two atmospheres above normal pressure. Some of the rats recovered and lived long term after as long as 15 minutes of respiratory arrest. The hyperbaric chamber appeared to have improved the outcome in a number of cases.

These studies indicate that Hextend can potentially be used in a variety of protocols in which donor blood is difficult or impossible to use, such as on the battlefield, or in parts of the world where there is a shortage of disease-free blood.

Another major focus of the Company's research and development effort has been on products and technology to extend the time animals can be kept cold and blood-substituted, and then revived without physical impairment. An integral part of that effort has been the development of techniques and procedures or "protocols" for use of the Company's products. A substantial amount of data has been accumulated through animal tests, including the proper surgical techniques, drugs and anesthetics, the temperatures and pressures at which blood and blood replacement solutions should be removed, restored and circulated, solution volume, the temperature range, and times, for maintaining circulatory arrest, and the rate at which the subject should be rewarmed.

Experiments intended to test the efficacy of the Company's low temperature blood replacement solutions and protocols for surgical applications involve replacing the animal's blood with the Company's solution, maintaining the animal in a cold blood-substituted state for a period of time, and then attempting to revive the animal. Experiments for multi-organ preservation involve the maintenance of the animal subjects at cold temperatures for longer periods of time than would



be required for many surgical applications, followed by transplant procedures to test the viability of one or more of the subject's vital organs.

The Company is conducting experiments at hospitals, medical schools, and university research facilities. These collaborative research programs are testing solutions and protocols developed in the Company's laboratories and, in some cases, comparing the efficacy of the Company's products with commercially available FDA approved products manufactured by other companies. Collaborative gerontological research is being conducted at the University of California at Berkeley. The Company intends to continue to foster relations with research hospitals and medical schools for the purpose of conducting collaborative research projects because it believes that such projects will introduce the Company's potential products to members of the medical profession and provide the Company with objective product evaluations from independent research physicians and surgeons.

BioTime has also expanded its product development efforts by initiating an interventional gerontology program focused on the identification of specific factors central to aging of the brain. The program, which is being undertaken with the cooperation of the University of California at Berkeley, is focused on the development of medical and pharmacological strategies to treat senescence related consequences.

## **Licensing**

### *Abbott Laboratories*

On April 23, 1997, the Company and Abbott entered into a License Agreement under which the Company granted to Abbott an exclusive license to manufacture and sell Hextend in the United States and Canada for all therapeutic uses other than those involving hypothermic surgery where the patient's body temperature is lower than 12°C ("Hypothermic Use"), or replacement of substantially all of a patient's circulating blood volume ("Total Body Washout"). The Company has retained all rights to manufacture, sell or license Hextend and other products in all other countries.

Under the Abbott License Agreement, Abbott has agreed to pay the Company up to \$40,000,000 in license fees, of which \$2,500,000 has been paid to date for the grant of the license and the achievement of certain milestones. Up to \$37,500,000 of additional license fees will be payable based upon annual net sales of Hextend, at the rate of 10% of annual net sales if annual net sales exceed \$30,000,000 or 5% if annual net sales are between \$15,000,000 and \$30,000,000. Abbott's obligation to pay licensing fees on sales of Hextend will expire on the earlier of January 1, 2007 or, on a country by country basis, when all patents protecting Hextend in the applicable country expire or any third party obtains certain regulatory approvals to market a generic equivalent product in that country.

In addition to the license fees, Abbott will pay the Company a royalty on total annual net sales of Hextend. The royalty rate will be 5% plus an additional .22% for each \$1,000,000 of annual net sales, up to a maximum royalty rate of 36%. The royalty rate for each year will be applied on a total net sales basis. Abbott's obligation to pay royalties on sales of Hextend will expire in the United States or Canada when all patents protecting Hextend in the applicable country expire and any third party obtains certain regulatory approvals to market a generic equivalent product in that country.

Abbott has agreed that the Company may convert Abbott's exclusive license to a non-exclusive license or may terminate the license outright if certain minimum sales and royalty payments are not met. In order to terminate the license outright, the Company would pay a termination fee in an amount ranging from the milestone payments made by Abbott to an amount equal to three times prior year net sales, depending upon when termination occurs. Abbott's exclusive license also may terminate, without the payment of termination fees by the Company, if Abbott fails to market Hextend. Abbott has agreed to manufacture Hextend for sale by the Company in the event that Abbott's exclusive license is terminated in either case.

Abbott has certain rights to acquire additional licenses to manufacture and sell the Company's other plasma expander products in the United States and Canada. If Abbott exercises these rights to acquire a license to sell such products for uses other than Hypothermic Surgery or Total Body Washout, in addition to paying royalties, Abbott will be obligated to pay a license fee based upon the Company's direct and indirect research, development and other costs allocable to the new product. If Abbott desires to acquire a license to sell any of the Company's products for use in Hypothermic Surgery or Total Body Washout, the license fees and other terms of the license will be subject to negotiation between the parties. For the purpose of determining the applicable royalty rates, net sales of any such new products licensed by Abbott will be aggregated with sales of Hextend. If Abbott does not exercise its right to acquire a new product license, the Company may manufacture and sell the product itself or may license others to do so.

In order to preserve its rights to obtain an exclusive license for PentaLyte under its License Agreement, Abbott notified the Company that Abbott will supply BioTime with batches of PentaLyte, characterization and stability studies, and other regulatory support needed for BioTime to file an IND and conduct clinical studies.

The foregoing description of the Abbott License Agreement is a summary only and is qualified in all respects by reference to the full text of that License Agreement.

#### *Other Licensing Efforts*

The Company is discussing prospective licensing arrangements with other pharmaceutical companies that have expressed their interest in marketing the Company's products abroad. In licensing arrangements that include marketing rights, the participating pharmaceutical company would be entitled to retain a large portion of the revenues from sales to end users and would pay the Company a royalty on net sales. There is no assurance that any such licensing arrangements can be made.

#### **Manufacturing**

##### *Manufacturing Arrangements*

Abbott manufactures Hextend for the North American market, and NPBI International, BV, a Netherlands company ("NPBI"), has manufactured lots of Hextend for the Company's use in seeking regulatory approval in Europe. Abbott and NPBI have the facilities to manufacture Hextend and other BioTime products in commercial quantities. If Abbott chooses not to obtain a license to manufacture and market another BioTime product, and if NPBI declines to manufacture BioTime

products on a commercial basis, other manufacturers will have to be found that would be willing to manufacture products for BioTime or any licensee of BioTime products.

### *Facilities Required*

Any products that are used in clinical trials for regulatory approval in the United States or abroad, or that are approved by the FDA or foreign regulatory authorities for marketing, have to be manufactured according to "good manufacturing practices" at a facility that has passed regulatory inspection. In addition, products that are approved for sale will have to be manufactured in commercial quantities, and with sufficient stability to withstand the distribution process, and in compliance with such domestic and foreign regulatory requirements as may be applicable. The active ingredients and component parts of the products must be either USP or themselves manufactured according to "good manufacturing practices."

The Company does not have facilities to manufacture its products in commercial quantities, or under "good manufacturing practices." Acquiring a manufacturing facility would involve significant expenditure of time and money for design and construction of the facility, purchasing equipment, hiring and training a production staff, purchasing raw material and attaining an efficient level of production. Although the Company has not determined the cost of constructing production facilities that meet FDA requirements, it expects that the cost would be substantial, and that the Company would need to raise additional capital in the future for that purpose. To avoid the incurrence of those expenses and delays, the Company is relying on contract and licensing arrangements with established pharmaceutical companies for the production of the Company's products, but there can be no assurance that satisfactory arrangements will be made for any new products that the Company may develop.

### *Raw Materials*

Although most ingredients in the products being developed by the Company are readily obtainable from multiple sources, the Company knows of only a few manufacturers of the hydroxyethyl starches that serve as the drug substance in Hextend, PentaLyte and HetaCool. Abbott presently has a source of supply of the hydroxyethyl starch used in Hextend, PentaLyte and HetaCool, and has agreed to maintain a supply sufficient to meet market demand for Hextend in the United States and Canada. The Company believes that it will be able to obtain a sufficient supply of starch for its needs in the foreseeable future, although the Company does not have supply agreements in place. If for any reason a sufficient supply of hydroxyethyl starch could not be obtained, the Company or a licensee would have to acquire a manufacturing facility and the technology to produce the hydroxyethyl starch according to good manufacturing practices. The Company would have to raise additional capital to participate in the development and acquisition of the necessary production technology and facilities.

If arrangements cannot be made for a source of supply of hydroxyethyl starch, the Company would have to reformulate its solutions to use one or more other starches that are more readily available. In order to reformulate its products, the Company would have to perform new laboratory testing to determine whether the alternative starches could be used in a safe and effective synthetic plasma volume expander, low temperature blood substitute or organ preservation solution. If needed, such testing would be costly to conduct and would delay the Company's product development

program, and there is no certainty that any such testing would demonstrate that an alternative ingredient, even if chemically similar to the one currently used, would be as safe or effective.

## **Marketing**

Hextend is being sold by Abbott in the United States. When regulatory approval is obtained, Hextend will be sold by Abbott in Canada as well.

Hextend has been approved for use and added to hospital formularies in hundreds of hospitals. Inclusion on hospital formularies is important because it enables physicians to obtain Hextend without the need to special order it.

Because Hextend is a surgical product, sales efforts must be directed to physicians and hospitals. The Hextend marketing strategy is designed to reach its target customer base through sales calls and an advertising campaign focused on the use of a plasma-like substance to replace lost blood volume and the ability of Hextend to support vital physiological processes.

Hextend competes with other products used to treat or prevent hypovolemia, including albumin, generic 6% hetastarch solutions, and crystalloid solutions. The competing products have been commonly used in surgery and trauma care for many years, and in order to sell Hextend, physicians must be convinced to change their product loyalties. Although albumin is expensive, crystalloid solutions and generic 6% hetastarch solutions sell at low prices. In order to compete with other products, particularly those that sell at lower prices, Hextend will have to be recognized as providing medically significant advantages.

As part of the marketing program, a number of studies have been conducted that show the advantages of receiving Hextend and other BioTime products during surgery. As these studies are completed, the results are presented at medical conferences and articles written for publication in medical journals. The Company is also aware of independent studies using Hextend that are being conducted by physicians and hospitals who may publish their findings in medical journals or report their findings at medical conferences. The outcome of future medical studies and timing of the publication or presentation of the results could have an effect on Hextend sales.

## **Government Regulation**

The FDA and foreign regulatory authorities will regulate the Company's proposed products as drugs, biologicals, or medical devices, depending upon such factors as the use to which the product will be put, the chemical composition and the interaction of the product on the human body. In the United States, products that are intended to be introduced into the body, such as blood substitute solutions for low temperature surgery and plasma expanders, will be regulated as drugs and will be reviewed by the FDA staff responsible for evaluating biologicals.

The Company's domestic human drug products will be subject to rigorous FDA review and approval procedures. After testing in animals, an Investigational New Drug (IND) application must be filed with the FDA to obtain authorization for human testing. Extensive clinical testing, which is generally done in three phases, must then be undertaken at a hospital or medical center to

demonstrate optimal use, safety and efficacy of each product in humans. Each clinical study is conducted under the auspices of an independent Institutional Review Board ("IRB"). The IRB will consider, among other things, ethical factors, the safety of human subjects and the possible liability of the institution. The time and expense required to perform this clinical testing can far exceed the time and expense of the research and development initially required to create the product. No action can be taken to market any therapeutic product in the United States until an appropriate New Drug Application ("NDA") has been approved by the FDA. Even after initial FDA approval has been obtained, further studies may be required to provide additional data on safety or to gain approval for the use of a product as a treatment for clinical indications other than those initially targeted. In addition, use of these products during testing and after marketing could reveal side effects that could delay, impede or prevent FDA marketing approval, resulting in a FDA-ordered product recall, or in FDA-imposed limitations on permissible uses.

The FDA regulates the manufacturing process of pharmaceutical products, requiring that they be produced in compliance with "good manufacturing practices." See "Manufacturing." The FDA also regulates the content of advertisements used to market pharmaceutical products. Generally, claims made in advertisements concerning the safety and efficacy of a product, or any advantages of a product over another product, must be supported by clinical data filed as part of an NDA or an amendment to an NDA, and statements regarding the use of a product must be consistent with the FDA approved labeling and dosage information for that product.

Sales of pharmaceutical products outside the United States are subject to foreign regulatory requirements that vary widely from country to country. Even if FDA approval has been obtained, approval of a product by comparable regulatory authorities of foreign countries must be obtained prior to the commencement of marketing the product in those countries. The time required to obtain such approval may be longer or shorter than that required for FDA approval.

### **Patents and Trade Secrets**

The Company currently holds 17 issued United States patents having composition and methods of use claims covering BioTime's proprietary solutions, including Hextend and PentaLyte. The most recent U.S. patents were issued during 2001. Thirty patents covering certain of the Company's solutions have also been issued in the countries of the European Union, Australia, Israel, Russia, Hong Kong, South Africa, Japan, and South Korea. Additional patent applications have been filed in the United States and numerous other countries for Hextend, PentaLyte and other solutions. Certain device patents describing BioTime's hyperbaric chamber, and proprietary microcannula have also been issued in the United States and overseas, both of which - although only used in research so far - have possible indications in clinical medicine.

There is no assurance that any additional patents will be issued, or that any patents now held or later obtained by the Company will not be successfully challenged by third parties and declared invalid or infringing of third party claims. Further, the enforcement of patent rights often requires litigation against third party infringers, and such litigation can be costly to pursue.

In addition to patents, the Company will rely on trade secrets, know-how and continuing technological advancement to maintain its competitive position. The Company has entered into intellectual property, invention and non-disclosure agreements with its employees and it is the

Company's practice to enter into confidentiality agreements with its consultants. There can be no assurance, however, that these measures will prevent the unauthorized disclosure or use of the Company's trade secrets and know-how or that others may not independently develop similar trade secrets and know-how or obtain access to the Company's trade secrets, know-how or proprietary technology.

## Competition

The Company's solutions will compete with products currently used to treat or prevent hypovolemia, including albumin, other colloid solutions, and crystalloid solutions presently manufactured by established pharmaceutical companies, and with human blood products. Some of these products, in particular crystalloid solutions, are commonly used in surgery and trauma care and sell at low prices. In order to compete with other products, particularly those that sell at lower prices, the Company's products will have to be recognized as providing medically significant advantages. Like Hextend, the competing products are being manufactured and marketed by established pharmaceutical companies that have large research facilities, technical staffs and financial and marketing resources. B.Braun presently markets Hespan, an artificial plasma volume expander containing 6% hetastarch in saline solution. Abbott and Baxter International manufacture and sell a generic equivalent of Hespan. As a result of the introduction of generic plasma expanders intended to compete with Hespan, competition in the plasma expander market has intensified and wholesale prices have declined. Abbott, which markets Hextend for BioTime in the United States, is also the leading seller of generic 6% hetastarch in saline solution. Aventis Behring, LLC, Baxter International, and Alpha Therapeutics sell albumin, and Abbott, Baxter International and B.Braun sell crystalloid solutions.

To compete with new and existing plasma expanders, the Company has developed products that contain constituents that may prevent or reduce the physiological imbalances, bleeding, fluid overload, edema, poor oxygenation, and organ failure that can occur when competing products are used. To compete with existing organ preservation solutions, the Company has developed solutions that can be used to preserve all organs simultaneously and for long periods of time.

A number of other companies are known to be developing hemoglobin and synthetic red blood cell substitutes and technologies. BioTime's products have been developed for use either before red blood cells are needed or in conjunction with the use of red blood cells. In contrast, hemoglobin and other red blood cell substitute products are designed to remedy ischemia and similar conditions that may result from the loss of oxygen carrying red blood cells. Those products would not necessarily compete with the Company's products unless the oxygenating molecules were included in solutions that could replace fluid volume and prevent or reduce the physiological imbalances as effectively as the Company's products. Generally, red blood cell substitutes are more expensive to produce and potentially more toxic than Hextend and PentaLyte.

Competition in the areas of business targeted by the Company is likely to intensify further as new products and technologies reach the market. Superior new products are likely to sell for higher prices and generate higher profit margins once acceptance by the medical community is achieved. Those companies that are successful in introducing new products and technologies to the market first may gain significant economic advantages over their competitors in the establishment

of a customer base and track record for the performance of their products and technologies. Such companies will also benefit from revenues from sales which could be used to strengthen their research and development, production, and marketing resources. All companies engaged in the medical products industry face the risk of obsolescence of their products and technologies as more advanced or cost effective products and technologies are developed by their competitors. As the industry matures, companies will compete based upon the performance and cost effectiveness of their products.

### **Employees**

As of December 31, 2001, the Company employed nine persons on a full-time basis and three persons on a part-time basis. Three full-time employees and one part-time employee hold Ph.D. Degrees in one or more fields of science.

### **Risk Factors**

Some of the factors that could materially affect the Company's operations and prospects are discussed below. There may be other factors that are not mentioned here or of which BioTime is not presently aware that could also affect BioTime's operations.

#### *Development Stage Company; Continuing Operating Losses*

BioTime is in the development stage, and, is principally engaged in research and development activities. To date, the Company's operating revenues have been generated primarily from licensing fees, including \$2,500,000 received from Abbott for the right to manufacture and market Hextend in the United States and Canada. Only one of the Company's products is presently on the market, and since the Company received FDA approval to market Hextend it has received \$204,409 of royalties on sales. As a result of the developmental nature of its business and the limited sales of its product, since the Company's inception in November 1990 it has incurred \$30,770,238 of losses. There can be no assurance that the Company will generate sufficient revenues from licensing its products and technologies and from royalties on sales of its products to be profitable.

#### *Uncertainty of Future Sales; Competition*

The Company's ability to generate substantial operating revenue depends upon the ability of Abbott to successfully market Hextend and any other BioTime products that they may license in the future. There can be no assurance that Hextend or any other products that receive FDA or foreign regulatory approval will be successfully marketed or that the Company will receive sufficient revenues from product sales to meet its operating expenses.

Widespread acceptance of the Company's products and technologies by the medical profession will take time to develop because many physicians and hospitals are reluctant to try a new product due to the high degree of risk associated with the application of new technologies and products in the field of human medicine.

Hextend and BioTime's other plasma expander products will compete with products currently used to treat or prevent hypovolemia, including albumin and other colloid solutions, and crystalloid solutions. Some of these products, in particular crystalloid solutions, are commonly used in surgery and trauma care and sell at low prices. In order to compete with other products, particularly those that sell at lower prices, the Company's products will have to be recognized as providing medically significant advantages. Such recognition may come from the publication of medical studies in medical journals or the presentation of the results of such studies at medical conferences. While some studies of Hextend have already been published or presented at medical conferences, it will take time to complete further studies and for the results of those studies to be published or presented.

Products that compete with Hextend are being manufactured and sold by established pharmaceutical companies with substantial resources. B. Braun presently sells Hespan, an artificial plasma volume expander that contains 6% hetastarch in saline solution. Abbott and Baxter International manufacture and sell a generic equivalent of Hespan. As a result of the introduction of generic plasma expanders intended to compete with Hespan, competition in the plasma expander market has intensified and wholesale prices have declined. Aventis Behring, LLC, Baxter International, and Alpha Therapeutics sell albumin. Abbott, Baxter International and B. Braun sell crystalloids. There also is a risk that the Company's competitors may succeed in developing safer or more effective products that could render the Company's products and technologies obsolete or noncompetitive.

#### *BioTime Needs to Raise Additional Capital*

The Company needs to raise capital to meet its operating expenses until such time as it is able to generate sufficient revenues from product sales or royalties. In August 2001, BioTime raised \$3,350,000 through the sale of debentures to a group of private investors. In March of 2002, the Company entered into a Credit Agreement with Alfred D. Kingsley, an investor and consultant to the Company, under which the Company may borrow up to \$300,000 for working capital purposes. Amounts borrowed under the Credit Agreement will bear interest at 10% per annum and will be due in one year or when BioTime receives at least \$600,000 through the sale of capital stock, loans from other lenders, fees under licensing agreements (excluding royalty payments), or any combination of those sources. Mandatory prepayments of principal will be due to the extent that the Company receives funds from any one or more of those sources in excess of \$300,000 but less than \$600,000, and the amount of any such mandatory prepayments of principal will reduce the maximum amount available under the Credit Agreement and will not be available for future borrowings. The Company will have the right to make voluntary prepayments of principal that would otherwise not be due, without penalty or premium but with accrued interest, at any time, and any amounts voluntarily prepaid will be available for future borrowings, so long as the Company is not in default under the Credit Agreement, and the outstanding principal balance loaned under the Credit Agreement does not exceed \$300,000. Although BioTime believes that its cash on hand and funds available under the Credit Agreement will be sufficient to allow it to continue its operations on a limited scale for 12 months, it will need additional funds to begin clinical trials of PentaLyte and to conduct its other product development and research programs. There can be no assurance that the Company will be able to raise additional funds on favorable terms or at all, or that such funds, if raised, will be sufficient to permit the Company to continue its operations, notwithstanding the progress of its research and development projects. The Company's operating expenses will increase if it succeeds in bringing additional products out of the laboratory testing phase of development and into clinical



trials. Additional financing will be required for the continuation or expansion of the Company's research and product development, additional clinical trials of new products, and production and marketing of Company products that receive FDA or foreign regulatory approval. Although the Company will continue to seek licensing fees from pharmaceutical companies for licenses to manufacture and market new products such as PentaLyte and HetaCool, additional sales of equity or debt securities will be required to meet the Company's short-term capital needs. Sales of additional equity securities could result in the dilution of the interests of present shareholders.

#### *BioTime Products Cannot Be Marketed Without FDA and Other Regulatory Approvals*

The products that BioTime develops cannot be sold until the FDA and corresponding foreign regulatory authorities approve the products for medical use. The regulatory process, which includes preclinical, clinical and post-clinical testing of each product to establish its safety and efficacy, can take several years to complete, and requires the expenditure of substantial time and funds. Data obtained from preclinical and clinical activities are susceptible to varying interpretations which could delay, limit or prevent regulatory approval. In addition, delays or rejections may be encountered as a result of changes in FDA policy during the period of product development and FDA regulatory review. Similar delays may also be encountered in foreign countries. There can be no assurance that, even after substantial expenditures of time and money, regulatory approval will be obtained for any new products developed by the Company. Moreover, even if regulatory approval of a product is granted, such approval may entail limitations on the indicated uses for which the product may be marketed. After regulatory approval is obtained, the approved product, the manufacturer and the manufacturing facilities are subject to continual review and periodic inspections, and a later discovery of previously unknown problems with a product, manufacturer or facility may result in restrictions on the product or manufacturer, including withdrawal of the product from the market. Failure to comply with the applicable regulatory requirements can, among other things, result in fines, suspensions of regulatory approvals, product recalls, operating restrictions and criminal prosecution. Additional government regulation may be established which could prevent or delay regulatory approval of the Company's products.

#### *Uncertainty as to the Successful Development of Medical Products*

The Company's business involves the attempt to develop new medical products and technologies. Such experimentation is inherently costly, time consuming and uncertain as to its results. If the Company is successful in developing a new technology or product, refinement of the new technology or product and definition of the practical applications and limitations of the technology or product may take years and require the expenditure of large sums of money. From the date of the Company's inception through December 31, 2001, the Company expensed \$21,630,518 on research and development, and the Company expects to continue to incur substantial research and development expenses.

#### *Absence of Manufacturing and Marketing Capabilities; Reliance Upon Licensing*

The Company presently does not have adequate facilities or resources to manufacture its products or the hydroxyethyl starches used in its products. BioTime has granted Abbott an exclusive license to manufacture and market Hextend in the United States and Canada, and BioTime plans to

enter into additional arrangements with pharmaceutical companies for the production and marketing of the Company's products in other countries. There can be no assurance that the Company will be successful in entering into those arrangements.

#### *Patents May Not Protect BioTime Products from Competition*

The Company has obtained patents in the United States, countries of the European Union, Australia, Israel, Russia, Hong Kong, South Africa, Japan, and South Korea, and has filed patent applications in certain foreign countries, for certain products, including Hextend and PentaLyte. No assurance can be given that any additional patents will be issued to the Company, or that the Company's patents will provide meaningful protection against the development of competing products. There also is no assurance that competitors will not successfully challenge the validity or enforceability of any patent issued to the Company. The costs required to uphold the validity and prevent infringement of any patent issued to the Company could be substantial, and the Company might not have the resources available to defend its patent rights.

#### *Prices and Sales of Products May be Limited by Health Insurance Coverage and Government Regulation*

Success in selling BioTime's products may depend in part on the extent to which health insurance companies, HMOs, and government health administration authorities such as Medicare and Medicaid will pay for the cost of the products and related treatment. Health insurance reimbursements and HMO coverage now include the cost of Hextend used in surgical procedures. However, there can be no assurance that such reimbursements will continue. In some foreign countries, pricing or profitability of health care products is subject to government control. In the United States, there have been a number of federal and state proposals to implement similar government controls, and new proposals are likely to be made in the future.

#### *Dependence Upon Key Personnel*

The Company depends to a considerable degree on the continued services of its executive officers. The loss of the services of any of the executive officers could have a material adverse effect on the Company. In addition, the success of the Company will depend, among other factors, upon successful recruitment and retention of additional highly skilled and experienced management and technical personnel.

#### *BioTime Does Not Pay Cash Dividends*

BioTime does not pay cash dividends on its Common Shares. For the foreseeable future it is anticipated that any earnings generated from the Company's business will be used to finance the growth of the Company and will not be paid out as dividends to BioTime shareholders. BioTime has also agreed not to declare or pay any cash dividends on its capital stock or to redeem or repurchase any shares of its capital stock, until it has paid off the debenture indebtedness in full.

### *The Price of BioTime Stock May Rise and Fall Rapidly*

BioTime Common Shares are traded on the American Stock Exchange. The market price of the Common Shares, like that of the common stock of many biotechnology companies, has been highly volatile. The price of BioTime shares may rise rapidly in response to certain events, such as the commencement of clinical trials of an experimental new drug, even though the outcome of those trials and the likelihood of ultimate FDA approval remains uncertain. Similarly, prices of BioTime shares may fall rapidly in response to certain events such as unfavorable results of clinical trials or a delay or failure to obtain FDA approval. The failure of the Company's earnings to meet analysts' expectations could result in a significant rapid decline in the market price of the Company's shares. In addition, the stock market has experienced and continues to experience extreme price and volume fluctuations which have affected the market price of the equity securities of many biotechnology companies and which have often been unrelated to the operating performance of these companies. Such broad market fluctuations, as well as general economic and political conditions, may adversely affect the market price of BioTime Common Shares.

#### **Item 2. Facilities.**

The Company occupies its office and laboratory facility in Berkeley, California under a lease that will expire on March 31, 2004. The Company presently occupies approximately 8,890 square feet of space and pays rent in the amount of \$11,024 per month. The rent will increase annually by the greater of 3% and the increase in the local consumer price index, subject to a maximum annual increase of 7%. The Company also pays all charges for utilities and garbage collection.

The Company has an option to extend the term of the lease for a period of three years, and to terminate the lease early upon six months notice.

The Company uses, on a fee per use basis, facilities for surgical research on animals at an unaffiliated privately run research center located in Winters, California. Contracting for the use of research facilities has enabled the Company to initiate its research projects without the substantial capital cost, overhead costs and delay associated with the acquisition and maintenance of a modern animal surgical research facility.

#### **Item 3. Legal Proceedings.**

The Company is not presently involved in any material litigation or proceedings, and to the Company's knowledge no such litigation or proceedings are contemplated.

#### **Item 4. Submission of Matters to a Vote of Security Holders.**

None.

## **Item 5. Market for Registrant's Common Equity and Related Stockholder Matters.**

The Company's Common Shares have been trading on the American Stock Exchange since August 31, 1999, and traded on the Nasdaq National Market from April 28, 1998 to August 30, 1999, and on the Nasdaq SmallCap Market from March 5, 1992 through April 27, 1998. The closing price of the Company's Common Shares on the AMEX on March 25, 2002 was \$3.58.

The following table sets forth the range of high and low bid prices for the Common Shares for the fiscal years ended December 31, 2000 and 2001 based on transaction data as reported by Nasdaq and AMEX.

<u>Quarter Ended</u>	<u>High</u>	<u>Low</u>
March 31, 2000	17.13	8.63
June 30, 2000	12.25	5.50
September 30, 2000	9.13	6.38
December 31, 2000	8.31	3.81
March 31, 2001	11.10	6.23
June 30, 2001	8.50	6.40
September 30, 2001	7.95	4.50
December 31, 2001	6.15	4.22

As of March 7, 2002, there were 324 shareholders of record of the Common Shares based upon information from the Registrar and Transfer Agent.

The Company has paid no dividends on its Common Shares since its inception and does not plan to pay dividends on its Common Shares in the foreseeable future. BioTime has also agreed not to declare or pay any cash dividends on its capital stock or to redeem or repurchase any shares of its capital stock, until it has paid off in full the indebtedness on certain debentures issued during August 2001. See "Management's Discussion and Analysis of Financial Condition and Results of Operations-Liquidity and Capital Resources."

During the three month periods ended September 30, 2001 and December 31, 2001, the Company issued 862 common shares and 1,087 common shares, respectively, to Milton H. Dresner in lieu of a cash fee for serving as a director. The shares were issued without registration under the Securities Act of 1933, as amended, pursuant to the exemption provided in Section 4(2). See "Directors' Meetings, Compensation and Committees of the Board."

## Item 6. Selected Financial Data.

The selected financial data as of, and for the periods ended, December 31, 2001, 2000, 1999 and 1998, and June 30, 1998 and 1997 presented below have been derived from the audited financial statements of the Company. The selected financial data should be read in conjunction with the Company's financial statements and notes thereto and "Management's Discussion and Analysis of Financial Condition and Results of Operations" included elsewhere herein.

### Statement of Operations Data:

	Year Ended December 31,			Six Months Ended December 31,	Year Ended June 30,	Year Ended June 30,
	2001	2000	1999	1998	1998	1997
<b>REVENUE:</b>						
License fee	\$ -	\$ -	\$ 1,037,500	\$ 250,000	\$ 1,150,000	\$ 62,500
Royalty from product sales	151,917	52,492	-	-	-	-
Total revenue	151,917	52,492	1,037,500	250,000	1,150,000	62,500
<b>EXPENSES:</b>						
Research and development	(1,685,168)	(3,362,841)	(4,900,521)	(1,723,860)	(3,048,775)	(2,136,325)
General and administrative	(1,961,342)	(1,779,931)	(1,896,690)	(710,131)	(1,849,312)	(1,209,546)
Total expenses	(3,646,510)	(5,142,772)	(6,797,211)	(2,433,991)	(4,898,087)	(3,345,871)
<b>INTEREST EXPENSE AND OTHER INCOME:</b>						
Interest expense	(278,576)	-	-	-	-	-
Other income	114,344	165,256	279,827	89,513	294,741	189,161
Total interest expense and other income	(164,232)	165,256	279,827	89,513	294,741	189,161
<b>NET LOSS</b>	<u>\$ (3,658,825)</u>	<u>\$ (4,925,024)</u>	<u>\$ (5,479,884)</u>	<u>\$ (2,094,478)</u>	<u>\$ (3,453,346)</u>	<u>\$ (3,094,210)</u>
<b>BASIC AND DILUTED LOSS PER SHARE</b>						
	<u>\$ (0.32)</u>	<u>\$ (0.44)</u>	<u>\$ (0.51)</u>	<u>\$ (0.21)</u>	<u>\$ (0.35)</u>	<u>\$ (0.35)</u>
<b>COMMON AND EQUIVALENT SHARES USED IN COMPUTING PER SHARE AMOUNTS:</b>						
<b>BASIC AND DILUTED</b>	<u>11,562,108</u>	<u>11,042,087</u>	<u>10,688,100</u>	<u>10,008,468</u>	<u>9,833,156</u>	<u>8,877,024</u>

### Balance Sheet Data:

	December 31, 2001	December 31, 2000	December 31, 1999	December 31, 1998	June 30, 1998	June 30, 1997
Cash, cash equivalents and short term investments	\$ 1,652,748	\$ 1,318,338	\$ 5,292,806	\$ 2,429,014	\$ 4,105,781	\$ 7,811,634
Working Capital	1,452,832	1,081,237	4,804,579	2,157,578	3,724,663	6,846,575
Total assets	1,941,375	1,677,484	5,678,644	2,809,455	4,641,780	8,297,774
Shareholders' equity	(99,094)	1,317,735	5,083,132	2,384,752	4,014,750	6,536,106

## **Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.**

### **Overview**

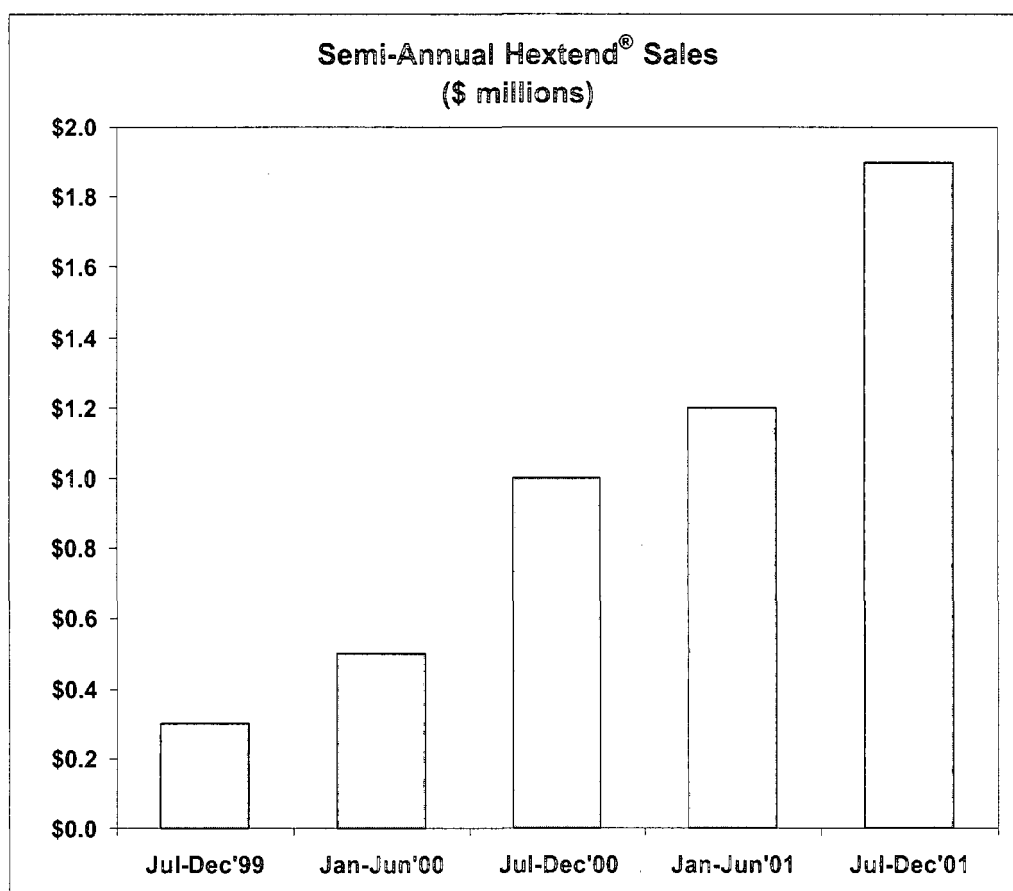
Since its inception in November 1990, the Company has been engaged primarily in research and development activities which have culminated in the commercial launch of Hextend, its lead product, and a clinical trial of PentaLyte. The Company's operating revenues have been generated primarily from licensing fees, including \$2,500,000 received from Abbott Laboratories for the right to manufacture and market Hextend® in the United States and Canada. As a result of the developmental nature of its business and the limited sales of its product, since the Company's inception in November 1990 it has incurred \$30,770,238 of losses. The Company's ability to generate substantial operating revenue depends upon its success in developing and marketing or licensing its plasma volume expanders and organ preservation solutions and technology for medical use.

Most of the Company's research and development efforts have been devoted to the Company's first three blood volume replacement products: Hextend,® PentaLyte,® and HetaCool.™ By testing and bringing all three products to the market, BioTime can increase its market share by providing the medical community with solutions to match patients' needs. By developing technology for the use of HetaCool in low temperature surgery, trauma care, and organ transplant surgery, BioTime may also create new market segments for its product line.

The Company's first product, Hextend, is a physiologically balanced blood plasma volume expander, for the treatment of hypovolemia. Hextend is being sold in the United States by Abbott Laboratories under an exclusive license from the Company. Abbott also has the right to sell Hextend in Canada, where an application for marketing approval is pending. Abbott also has a right to obtain licenses to manufacture and sell other BioTime products.

Under its License Agreement with the Company, Abbott will report sales of Hextend and pay the Company the royalties and license fees due on account of such sales within 90 days after the end of each calendar quarter. The Company recognizes such revenues in the quarter in which the sales report is received, rather than the quarter in which the sales took place, as the Company does not have sufficient sales history to accurately predict quarterly sales. Hextend sales are still in the ramp-up phase.

Revenues for the year ended December 31, 2001 include royalties on sales made by Abbott during the period beginning October 1, 2000 and ending September 30, 2001. Royalties on sales recognized as revenues made during that 12 month period were \$151,917. Royalties on sales during the three month period ending December 31, 2001 were \$57,235 but will not be recognized by the Company for financial accounting purposes until the first quarter of fiscal year 2002. Hextend sales are still in the ramp-up phase, as illustrated by the following graph:



The graph illustrates semi-annual sales of Hextend derived from quarterly sales reports provided to BioTime by Abbott with royalty payments. Royalties on sales that occurred during the third quarter of 1999 through the third quarter of 2000 are reflected in the Company's financial statements for the year ended December 31, 2000. Royalties on sales that occurred during the third quarter of 2000 through the third quarter of 2001 are reflected in the Company's financial statements for the year ended December 31, 2001. Royalties on sales that occurred during the fourth quarter of 2001 will be reflected in the Company's financial statements for the first quarter of 2002.

As shown above, semi-annual sales of Hextend have increased 760% from the last half of 1999, when the product was first launched, through the last half of 2001. Sales during the last half of 2001 were strong despite the adverse influences of the events of September 11, 2001, and sales of Hextend continue to rise progressively from year to year. BioTime attributes these gains in semi-annual sales to escalating marketing efforts, an accelerating demand for Hextend by physicians and hospitals due to its outstanding performance in many hundreds of operating rooms around the country, and recent clinical trial results which highlight its many clinical benefits. Based on preliminary estimates, current monthly sales of Hextend are nearly half of the amount of monthly sales the Company needs to operate at the break-even point at the present reduced rate of Company spending, which includes substantial salary reductions and limited research and development activities.

As part of the marketing program, a number of studies have been conducted that show the advantages of receiving Hextend and other BioTime products during surgery. For example, the

results of a clinical trial by NJ Wilkes et al performed in England and entitled "The effects of balanced versus saline-based hetastarch and crystalloid solutions on acid-base and electrolyte status and gastric mucosal perfusion in elderly surgical patients" was published in the October 2001 edition of *Anesthesia and Analgesia*, and underscores a number of Hextend benefits including maintenance of normal acid-base balance, blood calcium and chloride levels and perfusion of portions of the gastro-intestinal tract. Furthermore, the results of a clinical study of 200 cardiac surgery patients at Columbia University Medical Center in New York were presented at the 2001 Annual Meeting of the Anesthesiology Society of America. In that study, patients receiving Hextend had better outcomes than patients receiving other surgical fluids (6% hetastarch in normal saline, albumin in saline and lactated Ringer's), based upon maintenance of renal function, avoidance of dialysis, avoidance of deep venous thromboses, lower level of pain, nausea and suffering, shorter time to first meal, and less clotting abnormalities.

As future studies such as these are completed, the results will be presented at medical conferences and articles will be written for publication in medical journals. The Company is also aware of independent studies using Hextend that are being conducted by physicians and hospitals who may publish their findings in medical journals or report their findings at medical conferences. The outcome of future medical studies and timing of the publication or presentation of the results could have an effect on Hextend sales.

Hextend has become the standard plasma volume expander at a number of prominent teaching hospitals and leading medical centers. BioTime feels that as Hextend use proliferates within the leading US hospitals, other smaller hospitals will follow their lead and accelerate sales growth.

Hextend is being evaluated by a number of military physicians as a plasma volume expander in the treatment of hypovolemia in combat casualties. This was the topic of a number of formal presentations and discussions at Combat Fluid Resuscitation 2001, a meeting held at the Uniformed Services University of the Health Sciences in Bethesda, Maryland in June, 2001, under their auspices and that of the Office of Naval Research and the US Army Medical Research and Materiel Command. Additionally, a meeting was held at Hahnemann University Medical College of Pennsylvania in Philadelphia on October 8, 2001 at which military and civilian medical and scientific personnel discussed making recommendations to the United States military on the use of intravenous fluids and medical devices to treat combat casualties. Hextend was among the fluids considered during this meeting.

The Company has completed a Phase I clinical trial of PentaLyte and is planning the next phase of its clinical trials in which PentaLyte will be used to treat hypovolemia in surgery.

The Company is also continuing to develop solutions for low temperature surgery. Once a sufficient amount of data from successful low temperature surgery has been compiled, the Company plans to seek permission to use Hextend as a complete replacement for blood under near-freezing conditions. BioTime currently plans to market Hextend for complete blood volume replacement at very low temperatures under the registered trade mark "HetaCool™" after FDA approval is obtained.

Abbott has an option to obtain a license to market PentaLyte and HetaCool in the United States and Canada, and BioTime would receive additional license fees if those options are exercised,



in addition to royalties on subsequent sales of those products. BioTime and certain pharmaceutical companies are discussing potential manufacturing, distributing and marketing agreements for BioTime products in the rest of the world.

In order to commence clinical trials for regulatory approval of new products or new therapeutic uses of products, it will be necessary for the Company to prepare and file with the FDA an Investigational New Drug Application ("IND") or an amendment to expand a previous filing. Filings with foreign regulatory agencies will be required to commence clinical trials overseas. The Company has filed an application to market Hextend in Canada, and its first application for approval in a European Union member nation, Sweden. Regulatory approvals for other countries that are members of the European Union may be obtained through a mutual recognition process. If approvals can be obtained in the requisite number of member nations, then the Company would be permitted to market Hextend in all 16 member nations. BioTime is continuing to work with the appropriate officials to achieve regulatory approval in Canada and Sweden.

In addition to developing clinical trial programs, the Company plans to continue to provide funding for its laboratory testing programs at selected universities, medical schools and hospitals for the purpose of developing additional uses of Hextend, PentaLyte, HetaCool, and other new products, but the amount of research that will be conducted at those institutions will depend upon the Company's financial status. Because the Company's research and development expenses, clinical trial expenses, and production and marketing expenses will be charged against earnings for financial reporting purposes, management expects that there will be losses from operations from time to time during the near future.

Hextend® and PentaLyte® are registered trademarks, and HetaCool™ is a trademark, of BioTime.

## **Results of Operations**

### *Year Ended December 31, 2001 and Year Ended December 31, 2000*

For the year ended December 31, 2001, the Company recognized \$151,917 of royalty revenues. Under its License Agreement with the Company, Abbott reports sales of Hextend and pays the Company the royalties and license fees due on account of such sales within 90 days after the end of each calendar quarter. The Company recognizes such revenues in the quarter in which the sales report is received, rather than the quarter in which the sales took place, as the Company does not have sufficient sales history to accurately predict quarterly sales. Royalties on sales made during the fourth quarter of 2001 will not be recognized by the Company until the first quarter of fiscal year 2002.

For the year ended December 31, 2001, interest and other income decreased to \$114,344 from \$165,256 for the year ended December 31, 2000. The decrease is attributable to lower interest rates and cash balances for 2001, versus 2000.

Research and development expenses decreased to \$1,685,168 for the year ended December 31, 2001, down from \$3,362,841 for the year ended December 31, 2000. The decrease is attributable to a significant decrease in laboratory study expenses and fees paid to scientific research personnel as a result of a cost reduction program in which the Company reduced its research and development activities. Research and development expenses include laboratory study expenses, European clinical trial expenses, salaries, preparation of additional regulatory applications in the United States and Europe, manufacturing of solution for trials, and consultants' fees. It is expected that research and development expenses will increase if the Company obtains sufficient capital to commence new clinical studies of its products in the United States and Europe.

General and administrative expenses increased to \$1,961,342 for the year ended December 31, 2001 from \$1,779,931 for the year ended December 31, 2000. This increase is attributable to significant increases in expenditures for the Company's Annual Report and Meeting, fees required for continued stock exchange listing, overall insurance costs, investor/public relations costs, legal and accounting fees, and costs associated with continued maintenance of the Company's patent portfolio.

The company's interest expense increased by \$278,576 during 2001 because it began to borrow money to meet its capital needs.

*Year Ended December 31, 2000 and Year Ended December 31, 1999*

For the year ended December 31, 2000, the Company recognized \$52,492 of royalty revenues. During Fiscal 1999 the Company recognized \$1,037,500 of license fees that were received from Abbott during prior years. No license fee revenue was received in Fiscal 2000.

For the year ended December 31, 2000, interest and other income decreased to \$165,256 from \$279,827 for the year ended December 31, 1999. The decrease is attributable to a decrease in cash and cash equivalents for the year ended December 31, 2000.

Research and development expenses decreased to \$3,362,841 for the year ended December 31, 2000, from \$4,900,521 for the year ended December 31, 1999. The decrease is attributable to a decrease in clinical trials and laboratory study expenses, and completion of the European clinical trial. Research and development expenses include laboratory study expenses, European clinical trial expenses, salaries, preparation of additional regulatory applications in the United States and Europe, manufacturing of solution for trials, and consultants' fees.

General and administrative expenses decreased to \$1,779,931 for the year ended December 31, 2000, from \$1,896,690 for the year ended December 31, 1999. This decrease is attributable to a decrease in the general operations of the Company.

## *Taxes*

At December 31, 2001 the Company had a cumulative net operating loss carryforward of approximately \$37,200,000 for federal income tax purposes.

## *Liquidity and Capital Resources*

Since inception, the Company has primarily financed its operations through the sale of equity securities, licensing fees, and borrowings. During August 2001, the Company received loans of \$3,350,000 through the sale of debentures to a group of private investors, including Alfred D. Kingsley, an investor and consultant to the Company, who purchased \$1,500,000 of debentures, and Milton Dresner, a director of the Company. Mr. Kingsley's investment included the conversion of the \$1,000,000 principal balance of a line of credit that he had previously provided.

Interest on the debentures is payable at an annual rate of 10% and is payable semiannually. The principal amount of the debentures will be due and payable on August 1, 2004. BioTime may prepay the debentures, in whole or in part, at any time without premium or penalty. Under the terms of the debentures, BioTime has agreed that commencing October 1, 2001 it will restrict its quarterly cash payments for operating expenses to not more than \$450,000 (excluding interest payable on the debentures) plus the amount of cash revenues (excluding interest and dividends) it collects for the quarter. To the extent BioTime's expenditures during any quarter are less than \$450,000 over its revenues, it may expend the difference in one or more subsequent quarters.

That restriction will expire when BioTime obtains at least \$5,000,000 in cash through sales of equity securities or pays off the debenture indebtedness in full. For this purpose, cash revenues will include royalties, license fees, and other proceeds from the sale or licensing of its products and technology, but will not include interest, dividends, and any monies borrowed or the proceeds from the issue or sale of any debt or equity securities. BioTime has also agreed not to declare or pay any cash dividends on its capital stock or to redeem or repurchase any shares of its capital stock, until it has paid off the debenture indebtedness in full.

Investors who purchased the debentures also received warrants to purchase a total of 515,383 common shares at an exercise price of \$6.50 per share. The warrants will expire if not exercised by August 1, 2004. After June 30, 2002, the Company has the right to call the warrants for redemption at a redemption price of \$0.01 per share if the closing price of the Company's common shares on the American Stock Exchange equals or exceeds 150% of the exercise price for fifteen (15) consecutive trading days and the shares issuable upon the exercise of the warrants have been registered for sale under the Securities Act of 1933, as amended (the "Securities Act").

On March 27, 2002, the Company entered into a new Credit Agreement with Alfred D. Kingsley under which the Company may borrow up to \$300,000 for working capital purposes. Amounts borrowed under the Credit Agreement will bear interest at 10% per annum and will be due on March 27, 2003 or when BioTime receives at least \$600,000 through the sale of capital stock, loans from other lenders, fees under licensing agreements (excluding royalty payments), or any

combination of those sources. Mandatory prepayments of principal will be due to the extent that the Company receives funds from any one or more of those sources in excess of \$300,000 but less than \$600,000, and the amount of any such mandatory prepayments of principal will reduce the maximum amount available under the Credit Agreement and will not be available for future borrowings. The Company will have the right to make voluntary prepayments of principal that would otherwise not be due, without penalty or premium but with accrued interest, at any time, and any amounts voluntarily prepaid will be available for future borrowings, so long as the Company is not in default under the Credit Agreement, and the outstanding principal balance loaned under the Credit Agreement does not exceed \$300,000.

In connection with entering into the Credit Agreement on March 27, 2002, the Company granted Alfred D. Kingsley a warrant to purchase 30,000 shares of the Company's common stock at \$4.00 per share. The warrants are fully exercisable and non-forfeitable on the date of grant and expire on March 26, 2007.

The following depicts BioTime's contractual obligations as of December 31, 2001:

<u>Contractual Obligation</u>	<u>Total</u>	<u>Payments due by Period</u>	
		<u>less than 1 year</u>	<u>1-3 years</u>
Debentures	\$ 3,350,000	\$ -	\$ 3,350,000
Operating Leases	309,672	135,264	174,408
Total Contractual Cash Obligations	<u>\$ 3,659,672</u>	<u>\$ 135,264</u>	<u>\$ 3,524,408</u>

At December 31, 2001, BioTime had \$ 1,652,748 of cash on hand, and has implemented cost savings and expenditure limitation measures. The Company needs additional capital and greater revenues to continue its current operations, to begin clinical trials of PentaLyte, and to conduct its planned product development and research programs. On March 27, 2002, the Company received a new \$300,000 line of credit. The Company has also retained certain investment bankers on a non-exclusive basis to assist the Company in raising capital. However, sales of additional equity securities could result in the dilution of the interests of present shareholders. The Company is also continuing to seek new agreements with pharmaceutical companies to provide product and technology licensing fees and royalties. The availability and terms of equity financing and new license agreements are uncertain. The unavailability or inadequacy of additional financing or future revenues to meet capital needs could force the Company to modify, curtail, delay or suspend some or all aspects of its planned operations. However, management believes its existing cash and available credit are sufficient to allow the Company to operate through December 31, 2002,

## Critical Accounting Policies and Estimates

Management's discussion and analysis of the Company's financial condition and results of operations are based on the Company's financial statements, which have been prepared in conformity with accounting principles generally accepted in the United States of America. The preparation of these financial statements requires management to make judgments and estimates that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. The Company based its estimates on historical experience and on various other assumptions that it believed to be reasonable under the circumstances. Actual results may differ from such estimates under different assumptions or conditions. The following summarizes the Company's critical accounting policies and significant estimates used in preparing its financial statements:

### *Debenture and Warrant Valuation*

During 2001 and in connection with the issuance of \$3,350,000 of debt, the Company issued warrants to purchase common shares in the Company. The fair value of the warrants was estimated using the Black-Scholes option pricing model and has been recorded at a discount to the debentures. The discount is being amortized using the effective interest rate method over the term of the loan. The Company may prepay the debt, in whole or in part, at any time. If the Company were to prepay the debt, the unamortized portion of the discount would be recognized as a loss on the repayment date.

### *Revenue Recognition*

Under the Company's License Agreement with Abbott Laboratories, the Company has received \$2,500,000 of license fees based upon achievement of specified milestones. Such fees have been recognized as revenue as the milestones were achieved. Up to \$37,500,000 of additional license fees will be payable based upon annual net sales of Hextend, at the rate of 10% of annual net sales if annual net sales exceed \$30,000,000 or 5% if annual net sales are between \$15,000,000 and \$30,000,000. Abbott's obligation to pay licensing fees on sales of Hextend will expire on the earlier of January 1, 2007 or, on a country by country basis, when all patents protecting Hextend in the applicable country expire or any third party obtains certain regulatory approvals to market a generic equivalent product in that country.

In addition to the license fees, Abbott will pay the Company a royalty on total annual net sales of Hextend. The royalty rate will be 5% plus an additional .22% for each \$1,000,000 of annual net sales, up to a maximum royalty rate of 36%. The royalty rate for each year will be applied on a total net sales basis. Abbott's obligation to pay royalties on sales of Hextend will expire in the United States or Canada when all patents protecting Hextend in the applicable country expire and any third party obtains certain regulatory approvals to market a generic equivalent product in that country.

The Company recognizes such revenues in the quarter in which the sales report is received, rather than the quarter in which the sales took place, as the Company does not have sufficient sales

history to accurately predict quarterly sales. Revenues for the year ended December 31, 2001 include royalties on sales made by Abbott during the twelve months ended September 30, 2001. Royalties on sales made during the fourth quarter of 2001 will not be recognized by the Company until the first quarter of fiscal year 2002. Royalties on sales made during the quarter ended December 31, 2001 were not material to the Company's financial results.

#### *Deferred Tax Asset Valuation Allowance*

The Company records a valuation allowance to reduce its deferred tax assets when it is more likely than not, based upon currently available evidence and other factors, that it will not realize some portion of, or all of, the deferred tax assets. The Company bases its determination of the need for a valuation allowance on an ongoing evaluation of current evidence including, among other things, estimates of future earnings and the expected timing of deferred tax asset reversals. The Company charges or credits adjustments to the valuation allowance to income tax expense in the period in which these determinations are made. If the Company determines that it would be able to realize its deferred tax assets in the future in excess of its net recorded amount, an adjustment to the deferred tax asset would increase income in the period this determination was made. Likewise, if the Company determines that it would not be able to realize all or part of its net deferred tax assets in the future, the Company would charge to operations an adjustment to the deferred tax asset in the period this determination was made.

#### **Recently Issued Accounting Standards**

*Derivative instruments and hedging activities* - On January 1, 2001, the Company adopted Statement of Financial Accounting Standards No. 133 ("SFAS 133"), "Accounting for Derivative Instruments and Hedging Activities." SFAS 133, as amended, requires that every derivative instrument, including certain derivative instruments embedded in other contracts, be recorded on the balance sheet at its fair value. Changes in the fair value of derivatives are recorded each period in current earnings or other comprehensive income, depending on whether a derivative is designated as part of a hedge transaction and, if it is, the type of hedge transaction. SFAS 133, as amended, requires that the Company formally document, designate, and assess the effectiveness of transactions that receive hedge accounting. The Company adopted SFAS 133, as amended, on January 1, 2001 and did not elect hedge accounting as defined by SFAS 133. The adoption of this statement did not have a material impact on the Company's financial position or results of operations.

*Business combinations and goodwill* - In June 2001, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 141 ("SFAS 141"), "Business Combinations" and Statement of Financial Accounting Standards No. 142 ("SFAS 142"), "Goodwill and Other Intangible Assets." SFAS 141 requires that all business combinations initiated after June 30, 2001 be accounted for under the purchase method and addresses the initial recognition and measurement of goodwill and other intangible assets acquired in a business combination. SFAS 141 addresses the initial recognition and measurement of intangible assets acquired outside of a business combination and the accounting for goodwill and other intangible assets subsequent to their acquisition. SFAS 142 provides that intangible assets with finite useful lives be amortized and that

goodwill and intangible assets with indefinite lives will not be amortized, but will rather be tested at least annually for impairment. The Company will adopt SFAS 141 and 142 on January 1, 2002. The adoption of this statement will not have a material impact on the financial statements.

*Impairment and disposal of long lived assets* - In October 2001, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 144 ("SFAS 144"), "Accounting for the Impairment or Disposal of Long-Lived Assets." SFAS 144 supersedes SFAS 121, "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed Of," and the accounting and reporting provisions of Accounting Principles Board Opinion No. 30, "Reporting the Results of Operations - - Reporting the Effects of Disposal of a Segment of a Business, and Extraordinary, Unusual and Infrequently Occurring Events and Transactions," and addresses financial accounting and reporting for the impairment or disposal of long-lived assets. The Company will adopt SFAS 144 on January 1, 2002. The adoption of this statement will not have a material impact on the financial statements.

**Item 7A. Quantitative and Qualitative Disclosures About Market Risk.**

The Company did not hold any market risk sensitive instruments as of December 31, 2001, December 31, 2000, or December 31, 1999.

## **Item 8. Financial Statements and Supplementary Data**

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## INDEPENDENT AUDITORS' REPORT

To the Board of Directors and Shareholders  
BioTime, Inc.:

We have audited the accompanying balance sheets of BioTime, Inc. (a development stage company) as of December 31, 2001 and 2000, and the related statements of operations, shareholders' equity (deficit) and cash flows for the years ended December 31, 2001, 2000, and 1999, and the period from November 30, 1990 (inception) to December 31, 2001. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such financial statements present fairly, in all material respects, the financial position of BioTime, Inc. as of December 31, 2001 and 2000, and the results of its operations and its cash flows for the years ended December 31, 2001, 2000 and 1999, and the period from November 30, 1990 (inception) to December 31, 2001, in conformity with accounting principles generally accepted in the United States of America.

The Company is in the development stage as of December 31, 2001. As discussed in Note 1 to the financial statements, successful completion of the Company's product development program and, ultimately, the attainment of profitable operations is dependent upon future events, including maintaining adequate financing to fulfill its development activities, obtaining regulatory approval for products ultimately developed, and achieving a level of revenues adequate to support the Company's cost structure.

/s/DELOITTE & TOUCHE LLP

San Francisco, California

February 16, 2002

(March 27, 2002 as to Note 9 and the fourth paragraph of Note 1)

BIOTIME, INC.  
(A Development Stage Company)

BALANCE SHEETS

	December 31, 2001	December 31, 2000
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	\$ 1,652,748	\$ 1,318,338
Prepaid expenses and other current assets	<u>109,431</u>	<u>122,648</u>
Total current assets	<u>1,762,179</u>	<u>1,440,986</u>
EQUIPMENT, Net of accumulated depreciation of \$409,331 and \$352,104	167,946	226,598
DEPOSITS AND OTHER ASSETS	<u>11,250</u>	<u>9,900</u>
TOTAL ASSETS	<u>\$ 1,941,375</u>	<u>\$ 1,677,484</u>
LIABILITIES AND SHAREHOLDERS' EQUITY (DEFICIT)		
CURRENT LIABILITIES		
Accounts payable and accrued liabilities	\$ 309,347	\$ 359,749
COMMITMENTS (Note 6)		
DEBENTURES, net of discount of \$1,618,878	1,731,122	
SHAREHOLDERS' EQUITY (DEFICIT):		
Preferred Shares, no par value, undesignated as to Series, authorized 1,000,000 shares; none outstanding in 2001 and 2000 (Note 4)		
Common Shares, no par value, authorized 40,000,000 shares; issued and outstanding shares; 11,627,316 in 2001 and 11,426,604 in 2000 (Note 4 )	30,602,003	28,360,007
Contributed Capital	93,972	93,972
Deficit accumulated during development stage	<u>(30,795,069)</u>	<u>(27,136,244)</u>
Total shareholders' equity (deficit)	<u>(99,094)</u>	<u>1,317,735</u>
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY (DEFICIT)	<u>\$ 1,941,375</u>	<u>\$ 1,677,484</u>

See notes to financial statements.

**BIOTIME, INC.**  
**(A Development Stage Company)**

**STATEMENTS OF OPERATIONS**

	Year Ended December 31,			Period from Inception (November 30, 1990) to December 31, 2001
	2001	2000	1999	
<b>REVENUE:</b>				
License fee	\$ -	\$ -	\$ 1,037,500	\$ 2,500,000
Royalty from product sales	<u>151,917</u>	<u>52,492</u>	<u>-</u>	<u>204,409</u>
Total revenue	<u>151,917</u>	<u>52,492</u>	<u>1,037,500</u>	<u>2,704,409</u>
<b>EXPENSES:</b>				
Research and development	(1,685,168)	(3,362,841)	(4,900,521)	(21,630,518)
General and administrative	<u>(1,961,342)</u>	<u>(1,779,931)</u>	<u>(1,896,690)</u>	<u>(13,427,727)</u>
Total expenses	<u>(3,646,510)</u>	<u>(5,142,772)</u>	<u>(6,797,211)</u>	<u>(35,058,245)</u>
<b>INTEREST EXPENSE AND OTHER INCOME:</b>				
Interest expense	(278,576)	-	-	(278,576)
Other income	<u>114,344</u>	<u>165,256</u>	<u>279,827</u>	<u>1,862,174</u>
Total interest expense and other income	<u>(164,232)</u>	<u>165,256</u>	<u>279,827</u>	<u>1,583,598</u>
<b>NET LOSS</b>	<u>(3,658,825)</u>	<u>\$ (4,925,024)</u>	<u>\$ (5,479,884)</u>	<u>\$ (30,770,238)</u>
<b>BASIC AND DILUTED LOSS PER SHARE</b>	<u>\$ (0.32)</u>	<u>\$ (0.44)</u>	<u>\$ (0.51)</u>	
<b>COMMON AND EQUIVALENT SHARES USED IN COMPUTING PER SHARE AMOUNTS:</b>				
<b>BASIC AND DILUTED</b>	<u>11,562,108</u>	<u>11,042,087</u>	<u>10,688,100</u>	

See notes to financial statements.

**BIOTIME, INC.**  
(A Development Stage Company)

**STATEMENTS OF SHAREHOLDERS' EQUITY (DEFICIT)**

	Series A Convertible Preferred Shares		Common Shares		Contributed Capital	Deficit Accumulated During Development Stage
	Number of Shares	Amount	Number of Shares	Amount		
BALANCE, November 30, 1990 (date of inception)	--	--	--	--	--	--
NOVEMBER 1990: Common shares issued for cash			1,312,758	\$ 263		
DECEMBER 1990: Common shares issued for stock of a separate entity at fair value			1,050,210	137,400		
Contributed equipment at appraised value					\$ 16,425	
Contributed cash					77,547	
MAY 1991: Common shares issued for cash less offering costs			101,175	54,463		
Common shares issued for stock of a separate entity at fair value			100,020	60,000		
JULY 1991: Common shares issued for services performed			30,000	18,000		
AUGUST-DECEMBER 1991: Preferred shares issued for cash less offering costs of \$125,700	360,000	\$474,300				
MARCH 1992: Common shares issued for cash less offering costs of \$1,015,873			2,173,500	4,780,127		
Preferred shares converted into common shares	(360,000)	(474,300)	360,000	474,300		
Dividends declared and paid on preferred shares						\$(24,831)
MARCH 1994: Common shares issued for cash less offering costs of \$865,826			2,805,600	3,927,074		
JANUARY-JUNE 1995: Common shares repurchased with cash			(253,800)	(190,029)		
JULY 1995-JUNE 1996: Common shares issued for cash			608,697	1,229,670		
Common shares repurchased with cash			(18,600)	(12,693)		
Common shares warrants and options granted for services				356,000		
NET LOSS						(8,064,471)
BALANCE AT JUNE 30, 1996	-	\$ -	8,269,560	\$10,834,575	\$ 93,972	\$(8,089,302)
See notes to financial statements.						(Continued)

BIOTIME, INC.  
(A Development Stage Company)

STATEMENTS OF SHAREHOLDERS' EQUITY (DEFICIT)

(Continued)	Series A Convertible Preferred Shares		Common Shares		Contributed Capital	Deficit Accumulated During Development Stage
	Number of Shares	Amount	Number of Shares	Amount		
JULY 1996 - JUNE 1997:						
Common shares issued for cash less offering costs of \$170,597			849,327	\$ 5,491,583		
Common shares issued for cash (exercise of options and warrants)			490,689	1,194,488		
Common shares warrants and options granted for service				105,000		
JULY 1997 - JUNE 1998:						
Common shares issued for cash (exercise of options)			337,500	887,690		
Common shares warrants and options granted for service				38,050		
Common shares issued for services			500	6,250		
JULY 1998 - DECEMBER 1998:						
Common shares issued for cash (exercise of options and warrants)			84,000	395,730		
Common shares options granted for services				50,000		
Common shares issued for services			1,500	18,750		
NET LOSS						(8,642,034)
BALANCE AT DECEMBER 31, 1998	-	-	10,033,076	19,022,116	93,972	(16,731,336)
Common shares issued for cash (less offering costs of \$128,024)			751,654	7,200,602		
Common shares issued for cash and exchange for 2,491 common shares which were canceled (exercise of options)			65,509	199,810		
Common shares issued for services			792	9,900		
Common shares warrant donated				552,000		
Common shares issued for cash (exercise of warrant)			40,000	20,000		
Options granted for services				195,952		
NET LOSS						(5,479,884)
BALANCE AT DECEMBER 31, 1999	-	\$ -	10,891,031	\$ 27,200,380	\$ 93,972	\$ (22,211,220)

See notes to financial statements.

(Continued)

**BIOTIME, INC.**  
**(A Development Stage Company)**

**STATEMENTS OF SHAREHOLDERS' EQUITY (DEFICIT)**

(Continued)	Series A Convertible Preferred Shares		Common Shares		Contributed Capital	Deficit Accumulated During Development Stage
	Number of Shares	Amount	Number of Shares	Amount		
Common Shares issued for services			17,661	\$ 131,525		
Exercise of Options			51,000	51,000		
Exercise of Warrants (less issuance cost of \$36,176)			466,912	864,964		
Options granted for services				112,138		
NET LOSS						(4,925,024)
BALANCE AT DECEMBER 31, 2000	-	\$ -	11,426,604	\$ 28,360,007	\$ 93,972	\$ (27,136,244)
Common Shares issued for services			48,890	324,169		
Common Shares issued for cash and exchanged for 9,295 common shares which were canceled (exercise of options)			74,004	16,488		
Common Shares issued for cash (exercise of warrants)			77,818	182,872		
Issuance of warrants in connection with debt financing				1,850,716		
Compensation benefit from revaluation of warrants				(132,249)		
NET LOSS						(3,658,825)
BALANCE AT DECEMBER 31, 2001	-	\$ -	11,627,316	\$ 30,602,003	\$ 93,972	\$ (30,795,069)

See notes to financial statements.

(Concluded)

**BIOTIME, INC.**  
(A Development Stage Company)

**STATEMENTS OF CASH FLOWS**

	Year Ended December 31,			Period from Inception (November 30, 1990) to December 31, 2001
	2001	2000	1999	
<b>OPERATING ACTIVITIES:</b>				
Net loss	\$ (3,658,825)	\$ (4,925,024)	\$ (5,479,884)	\$ (30,770,238)
Adjustments to reconcile net loss to net cash used in operating activities:				
Deferred revenue			(187,500)	(1,000,000)
Depreciation	63,767	75,458	59,540	415,872
Amortization of debt discount	231,838			231,838
Cost of donation - warrants			552,000	552,000
Issuance of common shares, options and warrants in exchange for services	191,920	243,663	220,574	1,233,484
Supply reserves				200,000
Changes in operating assets and liabilities:				
Research and development supplies on hand				(200,000)
Prepaid expenses and other current assets	13,218	(15,364)	31,260	(109,431)
Deposits and other assets	(1,350)		50,800	(11,250)
Accounts payable and accrued liabilities	(50,402)	(235,763)	358,309	309,347
Deferred revenue				1,000,000
Net cash used in operating activities	<u>(3,209,834)</u>	<u>(4,857,030)</u>	<u>(4,394,901)</u>	<u>(28,148,378)</u>
<b>INVESTING ACTIVITIES:</b>				
Sale of investments				197,400
Purchase of short-term investments				(9,946,203)
Redemption of short-term investments				9,946,203
Purchase of equipment and furniture	(5,116)	(33,402)	(161,719)	(567,392)
Net cash used in investing activities	<u>(5,116)</u>	<u>(33,402)</u>	<u>(161,719)</u>	<u>(369,992)</u>
<b>FINANCING ACTIVITIES:</b>				
Proceeds from issuance of Warrants and Debentures	2,350,000			2,350,000
Borrowings under line of credit	1,000,000			1,000,000
Issuance of preferred shares for cash				600,000
Preferred shares placement costs				(125,700)
Issuance of common shares for cash			7,328,626	23,701,732
Common shares placement costs		(36,177)	(128,024)	(2,216,497)
Net proceeds from exercise of common share options and warrants	199,360	952,141	219,810	5,011,589
Contributed capital - cash				77,547
Dividends paid on preferred shares				(24,831)
Repurchase of common shares				(202,722)
Net cash provided by financing activities	<u>\$ 3,549,360</u>	<u>\$ 915,964</u>	<u>\$ 7,420,412</u>	<u>\$ 30,171,118</u>
See notes to financial statements				(Continued)

**BIOTIME, INC.**  
**(A Development Stage Company)**

**STATEMENTS OF CASH FLOWS**

	Year Ended December 31,			Period from Inception (November 30, 1990) to December 31, 2001
	2001	2000	1999	
INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	334,410	(3,974,468)	2,863,792	1,652,748
CASH AND CASH EQUIVALENTS:				
At beginning of period	1,318,338	5,292,806	2,429,014	--
At end of period	<u>\$ 1,652,748</u>	<u>\$ 1,318,338</u>	<u>\$ 5,292,806</u>	<u>\$ 1,652,748</u>
NONCASH FINANCING AND INVESTING ACTIVITIES:				
Receipt of contributed equipment				\$ 16,425
Issuance of common shares in exchange for shares of common stock of Cryomedical Sciences, Inc. in a stock- for-stock transaction				\$ 197,400
Conversion of line-of-credit to debentures	\$ 1,000,000	--	--	\$ 1,000,000
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:				
Cash paid for interest	\$ --	--	--	--
Cash paid for income taxes	\$ --	--	--	--
See notes to financial statements.				(Concluded)



**BIOTIME, INC.**  
**(A Development Stage Company)**

**NOTES TO FINANCIAL STATEMENTS**

**1. ORGANIZATION**

General - BioTime, Inc. (the Company) was organized November 30, 1990 as a California corporation. The Company is a biomedical organization, currently in the development stage, which is engaged in the research and development of synthetic plasma expanders, blood volume substitute solutions, and organ preservation solutions, for use in surgery, trauma care, organ transplant procedures, and other areas of medicine.

Development Stage Enterprise - Since inception, the Company has been engaged in research and development activities in connection with the development of synthetic plasma expanders, blood volume substitute solutions and organ preservation products. The Company has limited operating revenues and has incurred net losses of \$30,770,238 from inception to December 31, 2001. The successful completion of the Company's product development program and, ultimately, achieving profitable operations is dependent upon future events including maintaining adequate capital to finance its future development activities, obtaining regulatory approvals for the products it develops and achieving a level of revenues adequate to support the Company's cost structure.

The Company's operations are subject to a number of factors that can affect its operating results and financial condition. Such factors include but are not limited to the following: the results of clinical trials of the Company's products; the Company's ability to obtain United States Food and Drug Administration and foreign regulatory approval to market its products; competition from products manufactured and sold or being developed by other companies; the price of and demand for Company products; the Company's ability to obtain additional financing and the terms of any such financing that may be obtained; the Company's ability to negotiate favorable licensing or other manufacturing and marketing agreements for its products; the availability of ingredients used in the Company's products; and the availability of reimbursement for the cost of the Company's products (and related treatment) from government health administration authorities, private health coverage insurers and other organizations.

Certain Significant Risks and Uncertainties - At December 31, 2001, BioTime had \$ 1,652,748 of cash on hand, and has implemented cost savings and expenditure limitation measures. The Company needs additional capital and greater revenues to continue its current operations, to begin clinical trials of PentaLyte, and to conduct its planned product development and research programs. On March 27, 2002, the Company received a new \$300,000 line of credit (see Note 9). The Company has also retained certain investment bankers on a non-exclusive basis to assist the Company in raising capital. However, sales of additional equity securities could result in the dilution of the interests of present shareholders. The Company is also continuing to seek new

agreements with pharmaceutical companies to provide product and technology licensing fees and royalties. The availability and terms of equity financing and new license agreements are uncertain. The unavailability or inadequacy of additional financing or future revenues to meet capital needs could force the Company to modify, curtail, delay or suspend some or all aspects of its planned operations. However, management believes its existing cash and available credit are sufficient to allow the Company to operate through December 31, 2002,

## 2. SIGNIFICANT ACCOUNTING POLICIES

Financial Statement Estimates - The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Such management estimates include certain accruals. Actual results could differ from those estimates.

Revenue recognition - In April 1997, BioTime and Abbott Laboratories ("Abbott") entered into an Exclusive License Agreement (the "License Agreement") under which BioTime granted to Abbott an exclusive license to manufacture and sell BioTime's proprietary blood plasma volume expander solution Hextend in the United States and Canada for certain therapeutic uses.

Under the License Agreement, Abbott has paid the Company \$2,500,000 of license fees based upon achievement of specified milestones. Such fees have been recognized as revenue as the milestones were achieved. Up to \$37,500,000 of additional license fees will be payable based upon annual net sales of Hextend at the rate of 10% of annual net sales if annual net sales exceed \$30,000,000 or 5% if annual net sales are between \$15,000,000 and \$30,000,000. Abbott's obligation to pay license fees on sales of Hextend will expire on the earlier of January 1, 2007 or, on a country by country basis, when all patents protecting Hextend in the applicable country expire or any third party obtains certain regulatory approvals to market a generic equivalent product in that country.

In addition to the license fees, Abbott will pay the Company a royalty on annual net sales of Hextend. The royalty rate will be 5% plus an additional .22% for each increment of \$1,000,000 of annual net sales, up to a maximum royalty rate of 36%. Abbott's obligation to pay royalties on sales of Hextend will expire in the United States or Canada when all patents protecting Hextend in the applicable country expire and any third party obtains certain regulatory approvals to market a generic equivalent product in that country.

The Company recognizes such revenues in the quarter in which the sales report is received, rather than the quarter in which the sales took place, as the Company does not have sufficient sales history to accurately predict quarterly sales. Revenues for the year ended December 31, 2001 include royalties on sales made by Abbott during the twelve months ended September 30, 2001. Royalties on sales made during the fourth quarter of 2001 will not be recognized by the

Company until the first quarter of fiscal year 2002. Royalties on sales made during the quarter ended December 31, 2001 were not material to BioTime's financial results.

Abbott has agreed that the Company may convert Abbott's exclusive license to a non-exclusive license or may terminate the license outright if certain minimum sales and royalty payments are not met. In order to terminate the license outright, BioTime would pay a termination fee in an amount ranging from the milestone payments made by Abbott to an amount equal to three times prior year net sales, depending upon when termination occurs. Management believes that the probability of payments of any termination fee by the Company is remote.

Cash and cash equivalents - The Company considers all highly liquid investments purchased with an original maturity of three months or less to be cash equivalents.

Concentration of credit risk - Financial instruments that potentially subject the Company to significant concentrations of credit risk consist primarily of cash and cash equivalents. The Company limits the amount of credit exposure of cash balances by maintaining its accounts in high credit quality financial institutions.

Equipment is stated at cost or, in the case of donated equipment, at fair market value. Equipment is being depreciated using the straight-line method over a period of thirty-six to eighty-four months.

Patent costs associated with obtaining patents on products being developed are expensed as research and development expenses when incurred. These costs totaled \$343,501, \$215,424 and \$160,221 for the years ended December 31, 2001, 2000 and 1999, respectively, and cumulatively, \$1,220,209 for the period from inception (November 30, 1990) to December 31, 2001.

Research and development costs are expensed when incurred and consist principally of salaries, payroll taxes, research and laboratory fees, hospital and consultant fees related to clinical trials, and the Company's PentaLyte solution for use in human clinical trials.

Income Taxes - The Company accounts for income taxes in accordance with Statement of Financial Accounting Standards No. 109, "Accounting for Income Taxes," which prescribes the use of the asset and liability method whereby deferred tax asset or liability account balances are calculated at the balance sheet date using current tax laws and rates in effect. Valuation allowances are established when necessary to reduce deferred tax assets when it is more likely than not that a portion or all of the deferred tax assets will not be realized.

Stock-based compensation - The Company grants stock options for a fixed number of shares to employees with an exercise price equal to the fair value of the shares at the date of grant. The Company accounts for employee stock-based compensation in accordance with Accounting Principles Board Opinion No. 25 ("APB 25"), "Accounting for Stock Issued to Employees." The

Company accounts for stock-based awards to nonemployees in accordance with Statement of Financial Accounting Standards No. 123 ("SFAS 123"), "Accounting for Stock-Based Compensation" and Emerging Issues Task Force (EITF) Issue No. 96-18, "Accounting for Equity Instruments That Are Issued to Other Than Employees for Acquiring, or in Conjunction with Selling, Goods, or Services."

Stock split - In October 1997, the Company effected a three-for-one split of its common shares. All share and per share amounts have been restated to reflect the stock split for all periods presented.

Net Loss per share - Basic net loss per share is computed by dividing net loss available to common stockholders by the weighted-average common shares outstanding for the period. Diluted net loss per share reflects the weighted-average common shares outstanding plus the potential effect of dilutive securities or contracts which are convertible to common shares such as options, warrants, convertible debt, and preferred stock (using the treasury stock method) and shares issuable in future periods, except in cases where the effect would be anti-dilutive. Diluted loss per share for the years ended December 31, 2001, 2000, and 1999 exclude any effect from such securities as their inclusion would be antidilutive.

Comprehensive Loss - Statement of Financial Accounting Standards No. 130, "Reporting Comprehensive Income," establishes standards for reporting and displaying comprehensive income and its components (revenues, expenses, gains, and losses) in a full set of general-purpose financial statements. Comprehensive loss was the same as net loss for all periods presented.

Fair value of financial instruments - The carrying amount of the Company's long-term debt (debentures) approximates its fair value.

Segment information - The Company operates in the single segment of producing aqueous based synthetic solutions used in medical applications and is currently in the development stage of this segment.

Recently issued accounting standards -

*Derivative instruments and hedging activities* - On January 1, 2001, the Company adopted Statement of Financial Accounting Standards No. 133 ("SFAS 133"), "Accounting for Derivative Instruments and Hedging Activities." SFAS 133, as amended, requires that every derivative instrument, including certain derivative instruments embedded in other contracts, be recorded on the balance sheet at its fair value. Changes in the fair value of derivatives are recorded each period in current earnings or other comprehensive income, depending on whether a derivative is designated as part of a hedge transaction and, if it is, the type of hedge transaction. SFAS 133, as amended, requires that the Company formally document, designate, and assess the effectiveness of transactions that receive hedge accounting. The Company adopted SFAS 133, as amended, on January 1, 2001 and did not elect hedge accounting as defined by SFAS 133.

The adoption of this statement did not have a material impact on the Company's financial position or results of operations.

*Business combinations and goodwill* - In June 2001, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 141 (SFAS "141"), "Business Combinations" and Statement of Financial Accounting Standards No. 142 ("SFAS 142"), "Goodwill and Other Intangible Assets." SFAS 141 requires that all business combinations initiated after June 30, 2001 be accounted for under the purchase method and addresses the initial recognition and measurement of goodwill and other intangible assets acquired in a business combination. SFAS 141 addresses the initial recognition and measurement of intangible assets acquired outside of a business combination and the accounting for goodwill and other intangible assets subsequent to their acquisition. SFAS 142 provides that intangible assets with finite useful lives be amortized and that goodwill and intangible assets with indefinite lives will not be amortized, but will rather be tested at least annually for impairment. The Company will adopt SFAS 141 and 142 on January 1, 2002. The adoption of this statement will not have a material impact on the financial statements.

*Impairment and disposal of long lived assets* - In October 2001, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 144 ("SFAS 144"), "Accounting for the Impairment or Disposal of Long-Lived Assets." SFAS 144 supersedes SFAS 121, "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed Of," and the accounting and reporting provisions of Accounting Principles Board Opinion No. 30, "Reporting the Results of Operations - - Reporting the Effects of Disposal of a Segment of a Business, and Extraordinary, Unusual and Infrequently Occurring Events and Transactions," and addresses financial accounting and reporting for the impairment or disposal of long-lived assets. The Company will adopt SFAS 144 on January 1, 2002. The adoption of this statement will not have a material impact on the financial statements.

### 3. LINE OF CREDIT AND DEBENTURES

During March, 2001, BioTime entered into a one year Revolving Line of Credit Agreement (the "Credit Agreement") with Alfred D. Kingsley, an investor and consultant to the Company, under which BioTime could borrow up to \$1,000,000 for working capital purposes at an interest rate of 10% per annum. In consideration for making the line of credit available, the company issued to Mr. Kingsley a fully vested warrant to purchase 50,000 common shares at an exercise price of \$8.31. The fair value of this warrant of \$254,595 was determined using the Black-Scholes pricing model with the following assumptions: contractual life of 5 years; risk-free interest rate of 5.50%; volatility of 87.55%; and no dividends during the expected term. The fair value amount of the warrant was recorded as deferred financing costs and was being amortized to interest expense over the term of the Credit Agreement.

In August 2001, the company issued \$3,350,000 of debentures to an investor group. As part of the \$3,350,000 debenture issuance, Mr. Kingsley agreed to convert the \$1,000,000 current outstanding balance under the Credit Agreement to \$1,000,000 of debentures and purchased an

additional \$500,000 of debentures for cash. On the date of the conversion of the Credit Agreement to the debentures, the Credit Agreement was terminated, and no additional borrowings are available under the Credit Agreement. Interest on the debentures is payable at an annual rate of 10% and is payable semi-annually. The principal amount of the debentures is due on August 1, 2004. BioTime may prepay the debentures, in whole or in part, at any time without premium or penalty. Under the terms of the debentures, BioTime has agreed that commencing October 1, 2001, it will restrict its quarterly cash payments for operating expenses to not more than \$450,000 (excluding interest payable on the debentures) plus the amount of cash revenue (excluding interest and dividends) it collects for the quarter. This restriction will expire when the Company obtains at least \$5,000,000 in cash through sales of equity securities or pays off the debenture indebtedness in full. The Company has also agreed not to pay any cash dividends on or to redeem or repurchase any of its common shares outstanding until it has paid off the debentures in full.

Investors who purchased the debentures also received warrants to purchase a total of 515,385 common shares at an exercise price of \$6.50. The warrants expire on August 1, 2004. The total fair value of the warrants of \$1,596,124 was determined using the Black-Scholes option pricing model with the following assumptions: contractual life of 3 years; risk-free interest rate of 4.04%; volatility of 88%; and no dividends during the expected term. Of the \$3,350,000 of proceeds, \$1,596,124 was allocated to the warrants, which includes the unamortized portion (\$159,122) of the fair value of the warrant issued in connection with the Credit Agreement. The portion of the proceeds allocated to the debentures is being accreted to interest expense over the term of the debentures using the effective interest rate method. The Company has the right to call the warrants for redemption at a redemption price of \$0.01 per share if the closing price of the Company's common shares equals or exceeds 150% of the exercise price for fifteen consecutive trading days.

#### 4. SHAREHOLDERS' EQUITY (DEFICIT)

During June 1994, the Board of Directors authorized management to repurchase up to 200,000 of the Company's common shares at market price at the time of purchase. A total of 90,800 shares have been repurchased and retired. No shares have been repurchased since August 28, 1995.

During September 1995, the Company entered into an agreement for financial advisory services with Greenbelt Corp., a corporation controlled by Alfred D. Kingsley and Gary K. Duberstein, who are also shareholders of the Company. Under this agreement the Company issued to the financial advisor warrants to purchase 311,276 Common Shares at a price of \$1.93 per share, and the Company agreed to issue additional warrants to purchase up to an additional 622,549 Common Shares at a price equal to the greater of (a) 150% of the average market price of the Common Shares during the three months prior to issuance and (b) \$2 per share. The additional warrants were issued in equal quarterly installments over a two year period, beginning October 15, 1995.

Greenbelt has purchased 544,730 Common Shares by exercising some of those warrants at prices ranging from \$1.93 to \$2.35 per share. Greenbelt continues to hold warrants, expiring during April and June 2002, to purchase an aggregate of 155,636 Common Shares at prices ranging from \$13.75 to \$15.74. The other warrants have expired unexercised. The number of shares and exercise prices shown have been adjusted for the Company's subscription rights distributions during January 1997 and February 1999 and the payment of a stock dividend during October 1997.

During September 1996, the Company entered into an agreement with an individual to act as an advisor to the Company. In exchange for services, as defined, to be rendered by the advisor through September 1999, the Company issued warrants, with five year terms, to purchase 124,510 common shares at a price of \$6.02 per share. The exercise price and number of common shares for which the warrants may be exercised are subject to adjustment to prevent dilution in the event of a stock split, combination, stock dividend, reclassification of shares, sale of assets, merger or similar transaction. Warrants for 77,775 common shares vested and became exercisable and transferable when issued; warrants for the remaining 46,735 common shares vested ratably through September 1997 and became exercisable and transferable as vesting occurred. The estimated value of the services to be performed is \$60,000 and that amount has been amortized over the three year term of the agreement.

On February 5, 1997, the Company completed a subscription rights offering raising \$5,662,180, through the sale of 849,327 common shares.

During April 1998, the Company entered into a financial advisory services agreement with Greenbelt Corp. The agreement provided for an initial payment of \$90,000 followed by an advisory fee of \$15,000 per month that was paid quarterly. On August 11, 2000, the Board of Directors approved the renewal and amendment of this agreement for a period of twelve months ending March 31, 2001. Under the amended agreement, Greenbelt Corp. received 30,000 common shares in four quarterly installments of 7,500 shares each. On January 16, 2002, the agreement was renewed and amended to provide for the issuance of 40,000 common shares payable in quarterly installments of 10,000 ending on March 31, 2002. Under the agreement, upon the request of Greenbelt Corp., the Company will file a registration statement to register the shares for public sale. The Company recognized \$299,175 and \$105,000 of stock compensation expense (general & administrative) during the years ended December 31, 2001 and 2000, respectively, under the agreement.

On March 9, 1999, the Company completed a subscription rights offering raising \$7,328,626, through the sale of 751,654 common shares.

On July 15, 1999, the Company established the "BioTime Endowment for the Study of Aging and Low-Temperature Medicine" (the "Endowment") at the University of California at Berkeley. The endowment will support the research activities of faculty and researchers in the areas of aging and low temperature medicine. The initial term of the Endowment shall be for ten years, and upon review, renewed every five years thereafter. The Company funded the Endowment with \$65,000 in cash and a warrant to the University to purchase 40,000 of the Company's common

shares for \$0.50 per share. On September 23, 1999, the University of California at Berkeley exercised its warrant for 40,000 shares. The fair value of the warrant, estimated to be approximately \$552,000, was recognized in research and development expenses during the year ended December 31, 1999.

## 5. STOCK OPTION PLAN

The Board of Directors of the Company adopted the 1992 Stock Option Plan (the "Plan") during September 1992. The Plan was approved by the shareholders at the 1992 Annual Meeting of Shareholders on December 1, 1992. Under the Plan, as amended, the Company has reserved 1,800,000 common shares for issuance under options granted to eligible persons. No options may be granted under the Plan more than ten years after the date the Plan was adopted by the Board of Directors, and no options granted under the Plan may be exercised after the expiration of ten years from the date of grant. Under the Plan, options to purchase common shares may be granted to employees, directors and certain consultants at prices not less than the fair market value at date of grant for incentive stock options and not less than 85% of fair market value for other stock options. These options expire five to ten years from the date of grant and may be fully exercisable immediately, or may be exercisable according to a schedule or conditions specified by the Board of Directors or the Option Committee. During the years ended December 31, 2001, 2000 and 1999, employees and directors were granted options to purchase 80,000, 48,000 and 33,000 common shares, respectively, and non-employees were granted options to purchase 50,000, 1,500 and 63,000 shares, respectively. At December 31, 2001, 439,000 shares were available for future grants under the Option Plan.

Options to purchase 60,000 common shares, granted to consultants in 1999, vest upon achievement of certain milestones. At December 31, 2001, 5000 options had vested and 55,000 had not vested. The Company is amortizing into research and development expense the estimated fair value of such options, subject to remeasurement at the end of each reporting period, over the period estimated to achieve such milestones (one to two years). During 2001 the Company recorded a benefit of \$132,249 as a result of the remeasurement of such options. The Company recorded \$203,229 and \$171,027 as compensation expense related to these options during the years ended December 31, 2000 and 1999, respectively. The Company has \$112,166 in unamortized compensation expense at December 31, 2001. The Company's estimate of compensation cost at December 31, 2001 is based on the Black-Scholes option pricing model with the following assumptions: contractual life of 7 years; risk-free interest rate of 5.09%; volatility of 73%; and no dividends during the expected term.

Option activity under the Plan is as follows:

	<b>Number of Shares</b>	<b>Weighted Average Exercise Price</b>
Outstanding, December 31, 1998 (440,500 exercisable at a weighted average price of \$5.76)	470,500	\$ 5.46



	Number of Shares	Weighted Average Exercise Price
Granted (weighted average fair value of \$9.52 per share)	96,000	11.81
Exercised	(68,000)	12.65
Canceled	--	--
Outstanding, December 31, 1999 (438,500 exercisable at a weighted average price of \$6.33)	498,500	6.98
Granted (weighted average fair value of \$7.03 per share)	52,500	9.95
Exercised	(51,000)	1.00
Canceled	(30,000)	1.00
Outstanding, December 31, 2000	470,000	8.34
Granted (weighted average fair value of \$3.81 per share)	150,000	6.30
Exercised	(60,799)	1.21
Canceled	(73,500)	7.15
Outstanding, December 31, 2001	485,701	8.78

Additional information regarding options outstanding as of December 31, 2001 is as follows:

Range of Exercise Prices	Number Outstanding	Options Outstanding		Options Exercisable	
		Weighted Avg. Remaining Contractual Life (yrs)	Weighted Avg. Exercise Price	Number Exercisable	Weighted Avg. Exercise Price
\$1.13	38,701	2.42	\$1.13	38,701	\$1.13
4.92-8.81	153,500	4.56	6.15	153,500	6.15
9.00-13.00	274,500	2.88	10.68	219,500	10.61
18.25	19,000	0.90	18.25	19,000	18.25
\$1.0-\$18.25	485,701	3.30	\$8.78	430,701	\$8.40

Had compensation cost for employee options granted in 2001, 2000, and 1999 under the Company's Option Plan been determined based on the fair value at the grant dates, as prescribed in Statement of Financial Accounting Standards No. 123, "Accounting for Stock-Based Compensation," the Company's net loss and pro forma net loss per share would have been as follows:

	<u>Year Ended December 31,</u>		
	<u>2001</u>	<u>2000</u>	<u>1999</u>
Net Loss:			
As reported	\$3,658,825	\$4,925,024	\$5,479,884
Pro forma	\$3,971,595	\$5,103,989	\$5,706,878
Basic and diluted net loss:			
As reported	\$0.32	\$0.44	\$0.51
Pro forma	\$0.34	\$0.46	\$0.54

The fair value of each option grant is estimated using the Black-Scholes option pricing model with the following assumptions during the applicable period:

	<u>2001</u>	<u>2000</u>	<u>1999</u>
Average risk-free rate of return	4%-5%	6.72%	5.99%
Weighted average expected option life	5 years	5 years	5 years
Volatility rate	45%-60%	87.4%	84.7%
Dividend yield	0%	0%	0%

## 6. COMMITMENTS AND CONTINGENCIES

The Company has an employment agreement with one officer who is also a shareholder, for a five-year term, which expires in April 2002. This agreement provides for a base salary with annual increases. The agreement also provides that in the event the officer's employment terminates, voluntarily or involuntarily, after a change in control of the Company through an acquisition of voting stock or assets, or a merger or consolidation with another corporation or entity, the officer will be entitled to severance payments equal to the greater of (a) 2.99 times the average annual compensation for the preceding five years or (b) the balance of the base salary

for the unexpired portion of the term of the employment agreement. This officer/shareholder has signed an intellectual property agreement with the Company as a condition of employment.

The Company occupies its office and laboratory facility in Berkeley, California under a lease that will expire on March 31, 2004. The Company presently occupies approximately 8,890 square feet of space with a monthly rent of \$11,024. The rent increases annually by the greater of 3% and the increase in the local consumer price index, subject to a maximum annual increase of 7%. Due to an increase in the local consumer price index of only 1.8% over the period defined in the lease agreement, rent will only be increased by the minimum amount of 3% (yielding a new rent, payable beginning with the month of April, 2002, of \$11,355). Rent expense totaled \$122,096, \$113,600 and \$91,796 for the years ended December 31, 2001, 2000 and 1999, respectively.

## 7. INCOME TAXES

The primary components of the net deferred tax asset are:

	Year Ended December 31, 2001	Year Ended December 31, 2000
Deferred Tax Asset:		
Net operating loss carryforwards	\$ 14,056,615	\$ 11,938,185
Research & Development Credits	1,224,065	873,269
Other, net	81,466	(100,841)
Total	15,362,146	12,710,613
Valuation allowance	(15,362,146)	(12,710,613)
Net deferred tax asset	\$ -0-	\$ -0-

No tax benefit has been recorded through December 31, 2001 because of the net operating losses incurred and a full valuation allowance provided. A valuation allowance is provided when it is more likely than not that some portion of the deferred tax asset will not be realized. The Company established a 100% valuation allowance for all periods presented due to the uncertainty of realizing future tax benefits from its net operating loss carryforwards and other deferred tax assets.

As of December 31, 2001, the Company has net operating loss carryforwards of approximately \$37,200,000 for federal and \$18,000,000 for state tax purposes, which begin to expire during fiscal years 2005 and 2001, respectively. In addition, the Company has tax credit carryforwards for federal and state tax purposes of \$778,682 and \$445,383, respectively, which will begin to expire in 2005.

Internal Revenue Code Section 382 places a limitation (the "Section 382 Limitation") on the amount of taxable income which can be offset by net operating loss ("NOL") carryforwards after a change in control (generally greater than 50% change in ownership) of a loss corporation. California has similar rules. Generally, after a control change, a loss corporation cannot deduct NOL carryforwards in excess of the Section 382 Limitation. Due to these "change in ownership" provisions, utilization of the NOL and tax credit carryforwards may be subject to an annual limitation regarding their utilization against taxable income in future periods.

#### 8. RELATED PARTY TRANSACTIONS

During the years ended December 31, 2000 and 1999, fees for consulting services of \$5,500 and \$19,125, respectively, were paid to a member of the Board of Directors. No consulting fees were paid to any members of the Board of Directors during the year ended December 31, 2001.

#### 9. SUBSEQUENT EVENTS

On March 27, 2002, BioTime entered into a new Revolving Line of Credit Agreement (the "Credit Agreement") with Alfred D. Kingsley under which BioTime may borrow up to \$300,000 for working capital purposes. Amounts borrowed under the Credit Agreement will be due on March 31, 2003 or when BioTime receives at least \$600,000 through the sale of capital stock, loans from other lenders, fees under licensing agreements (excluding royalty payments), or any combination of those sources. Interest on borrowings shall accrue at a rate of 10% per annum and is payable with principal on the maturity date. Mandatory prepayments of principal will be due to the extent that the Company receives funds from any one or more of those sources in excess of \$300,000 but less than \$600,000.

In connection with entering into the Credit Agreement on March 27, 2002, the Company granted Alfred D. Kingsley a warrant to purchase 30,000 shares of the Company's common stock at \$4.00 per share. The warrants are fully exercisable and non-forfeitable on the date of grant and expire on March 26, 2007.

## 10. QUARTERLY RESULTS (UNAUDITED)

Summarized unaudited results of operations for each quarter of the years ended December 31, 2001 and 2000 are as follows:

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total Year
<u>Fiscal Year Ended December 31, 2001</u>					
Revenue	\$32,695	\$29,958	\$36,416	\$52,848	\$151,917
Net Loss	\$951,739	\$1,120,024	\$861,273	\$725,789	\$3,658,825
Net Loss per share	\$.08	\$.10	\$.07	\$.06	\$.32

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total Year
<u>Fiscal Year Ended December 31, 2000</u>					
Revenue	\$5,732	\$7,387	\$19,592	\$19,781	\$52,492
Net Loss	\$1,319,947	\$1,329,761	\$1,224,955	\$1,050,361	\$4,925,024
Net Loss per share	\$.12	\$.12	\$.11	\$.10	\$.44

### Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

## PART III

### Item 10. Directors and Executive Officers of the Registrant.

#### Directors and Executive Officers

The names and ages of the directors and executive officers of the Company are as follows:

**Paul Segall, Ph.D.**, 59, is the Chairman and Chief Executive Officer and has served as a director of the Company since 1990. Dr. Segall received a Ph.D. in Physiology from the University of California at Berkeley in 1977.

Ronald S. Barkin, 56, served as President of BioTime from October 1997 through March 2002, after serving as Executive Vice President since April 1997. Mr. Barkin has been a director of the Company since 1990. Before becoming an executive officer of the Company, Mr. Barkin practiced civil and corporate law for more than 25 years after getting a J.D. from Boalt Hall, University of California at Berkeley.

Hal Sternberg, Ph.D., 48, is the Vice President of Research and has been a director of the Company since 1990. Dr. Sternberg was a visiting scientist and research Associate at the University of California at Berkeley from 1985-1988, where he supervised a team of researchers studying Alzheimer's Disease. Dr. Sternberg received his Ph.D. from the University of Maryland in Biochemistry in 1982.

Harold Waitz, Ph.D., 59, is the Vice President of Engineering and Regulatory Affairs and has been a director of the Company since 1990. He received his Ph.D. in Biophysics and Medical Physics from the University of California at Berkeley in 1983.

Judith Segall, 48, is the Vice President of Technology and Secretary, and has been a director of the Company from 1990 through 1994, and from 1995 through the present date. Ms. Segall received a B.S. in Nutrition and Clinical Dietetics from the University of California at Berkeley in 1989.

Steven A. Seiberg, J.D., 35, became Chief Financial Officer and Treasurer during August 2001. Prior to assuming these positions, Mr. Seiberg worked for over five years as BioTime's Director of Financial and Legal Research, a position that involved, among other duties, contract modifications and management of the Company's intellectual property portfolio. Mr. Seiberg received a J.D. from Hastings College of the Law in San Francisco in 1994.

Jeffrey B. Nickel, Ph.D., 57, joined the Board of Directors of the Company during March 1997. Dr. Nickel is the President of Nickel Consulting through which he has served as a consultant to companies in the pharmaceutical and biotechnology industries since 1990. Prior to starting his consulting business, Dr. Nickel served in a number of management positions for Syntex Corporation and Merck & Company. Dr. Nickel received his Ph.D. in Organic Chemistry from Rutgers University in 1970.

Milton H. Dresner, 76, joined the Board of Directors of the Company during February 1998. Mr. Dresner is a private investor and principal of Milton Dresner Investments. Mr. Dresner was formerly the Co-Chairman of the Highland Companies, a diversified organization that was engaged in the development and ownership of residential and industrial real estate. Mr. Dresner serves as a director of Avatar Holdings, Inc., a real estate development company, and Childtime Learning Centers, Inc. a child care and pre-school education services company.

Katherine Gordon, Ph.D., 47, joined the Board of Directors of the Company during June 2001. Dr. Gordon is the Chief Executive Officer and a director of Apollo BioPharmaceuticals, Inc. (a wholly-owned subsidiary of MitoKor), a company engaged in the research and development of

drugs to treat brain cell damage and diseases. Prior to founding Apollo in 1992, Dr. Gordon was an Associate Director at Genzyme Corporation. Dr. Gordon obtained her Ph.D. from Wesleyan University in 1982 and was a post-doctoral fellow at Yale University.

### **Executive Officers**

Paul Segall, Ronald S. Barkin, Steven Seinfeld, Hal Sternberg, Harold Waitz and Judith Segall are the only executive officers of BioTime.

There are no family relationships among the directors or officers of the Company, except that Paul Segall and Judith Segall are husband and wife.

### **Directors' Meetings, Compensation and Committees of the Board**

The Board of Directors has an Audit Committee, the members of which are Jeffrey Nickel, Milton Dresner, and Katherine Gordon. The purpose of the Audit Committee is to recommend the engagement of the corporation's independent auditors and to review their performance, the plan, scope and results of the audit, and the fees paid to the corporation's independent auditors. The Audit Committee also will review the Company's accounting and financial reporting procedures and controls and all transactions between the Company and its officers, directors, and shareholders who beneficially own 5% or more of the Common Shares.

The Company does not have a standing Nominating Committee. Nominees to the Board of Directors are selected by the entire Board.

The Board of Directors has a Stock Option Committee that administers the Company's 1992 Stock Option Plan and makes grants of options to key employees, consultants, scientific advisory board members and independent contractors of the Company, but not to officers or directors of the Company. The members of the Stock Option Committee are Paul Segall, Ronald S. Barkin, and Hal Sternberg. The Stock Option Committee was formed during September 1992.

During the fiscal year ended December 31, 2001, the Board of Directors met 8 times. No director attended fewer than 75% of the meetings of the Board or any committee on which they served.

Directors of the Company who are not employees receive an annual fee of \$20,000, which may be paid in cash or in Common Shares, at the election of the director. Milton Dresner received 3,224 Common Shares in lieu of the cash fee during the year ended December 31, 2001. During the year ended December 31, 2001, Katherine Gordon received options to purchase 15,000 Common Shares, and Jeffrey Nickel and Milton Dresner each received options to purchase 10,000 Common Shares. Directors of the Company and members of committees of the Board of Directors who are employees of the Company are not compensated for serving as directors or attending meetings of the Board or committees of the Board. Directors are entitled to reimbursements for their out-of-pocket

expenses incurred in attending meetings of the Board or committees of the Board. Directors who are employees of the Company are also entitled to receive compensation in such capacity.

For 2002, the Directors will receive 20,000 options exercisable at the closing price for BioTime stock on the American Stock Exchange on the last day of March, 2002. During this year, the Directors will not receive cash fees. Of the 20,000 options being given, 12,500 will be fully vested and exercisable upon grant. The remaining 7500 options will vest and become exercisable in nine equal monthly installments based on continued service on the Board of Directors.

### **Executive Compensation**

The Company had five-year employment agreements with Paul Segall, Chairman and Chief Executive Officer; Judith Segall, Vice President of Technology and Corporate Secretary; Hal Sternberg, Vice President of Research; and Harold Waitz, Vice President of Engineering and Regulatory Affairs that expired on December 31, 2000 and were renewed for a one-year term that ended on December 31, 2001. The Company also has an employment agreement with Ronald S. Barkin, President, that will expire on March 31, 2002. Mr. Barkin will not continue as President after termination of his employment agreement. The executive officers were entitled to receive annual salaries of \$163,000 for the year ended December 31, 2001, but in July, 2001 Drs. Segall, Sternberg and Waitz and Judith Segall agreed to participate in the Company's voluntary salary reduction program. Since these voluntary salary reductions went into effect, Dr. Segall has received a salary of \$3,000 per month and Drs. Sternberg and Waitz and Judith Segall have each received a salary of \$6,000 per month. The Board of Directors has approved a continuation of those reduced salaries until the Board of Directors determines that the Company is in a financial position to commit to other compensation arrangements commensurate with each officer's experience and past performance and prevailing compensation rates in the San Francisco Bay area.

Each executive officer has also executed an Intellectual Property Agreement which provides that the Company is the owner of all inventions developed by the executive officer during the course of his or her employment.

The following table summarizes certain information concerning the compensation paid to the five most highly compensated executive officers during the last three full fiscal years.



## SUMMARY COMPENSATION TABLE

<u>Name and Principal Position</u>	<u>Year Ended</u>	<u>Annual Compensation</u>		<u>Long-Term Compensation</u>	
		<u>Salary(\$)</u>	<u>Bonus</u>	<u>Stock Options (Shares)</u>	
Paul Segall Chairman and Chief Executive Officer	December 31, 2001	\$101,792			
	December 31, 2000	\$163,000			
	December 31, 1999	\$156,000			
Ronald S. Barkin President	December 31, 2001	\$163,000			
	December 31, 2000	\$163,000			
	December 31, 1999	\$156,000			
Hal Sternberg Vice President of Research	December 31, 2001	\$115,292			
	December 31, 2000	\$163,000			
	December 31, 1999	\$156,000			
Harold Waitz Vice President of Engineering	December 31, 2001	\$125,083			
	December 31, 2000	\$163,000			
	December 31, 1999	\$156,000			
Judith Segall Vice President and Corporate Secretary	December 31, 2001	\$115,292			
	December 31, 2000	\$163,000			
	December 31, 1999	\$156,000			

### *Insider Participation in Compensation Decisions*

The Board of Directors does not have a standing Compensation Committee. Instead, the Board of Directors as a whole and the Audit Committee approve all executive compensation. All of the executive officers of the Company serve on the Board of Directors but do not vote on matters pertaining to their own personal compensation. Paul Segall and Judith Segall do not vote on matters pertaining to each other's compensation. None of the members of the Audit Committee are employees of the Company.

### **Stock Options**

Of the five most highly compensated executive officers of the Company, only Ronald S. Barkin held any stock options during the fiscal year ended December 31, 2001. The following table contains information concerning Mr. Barkin's stock options.

**Aggregated Options Exercised in Last Fiscal Year,  
and Fiscal Year-End Option Values**

<u>Name</u>	Number of Shares Acquired on <u>Exercise</u>	Value Realized <u>(\$)</u>	Number of Unexercised Options at December 31, 2001		Value of Unexercised In-the-Money Options at December 31, 2001	
			<u>Exercisable</u>	<u>Unexercisable</u>	<u>Exercisable</u>	<u>Unexercisable</u>
Ronald S. Barkin	0	0	90,000	0	0	0

**Certain Relationships and Related Transactions**

During September 1995, the Company entered into an agreement for financial advisory services with Greenbelt Corp. ("Greenbelt"), a corporation controlled by Alfred D. Kingsley and Gary K. Duberstein, who are also shareholders of the Company. Under this agreement the Company issued to the financial advisor warrants to purchase 311,276 Common Shares at a price of \$1.93 per share, and the Company agreed to issue additional warrants to purchase up to an additional 622,549 Common Shares at a price equal to the greater of (a) 150% of the average market price of the Common Shares during the three months prior to issuance and (b) \$2 per share. The additional warrants were issued in equal quarterly installments over a two year period, beginning October 15, 1995.

The number of shares and exercise prices shown have been adjusted for the Company's subscription rights distributions during January 1997 and February 1999 and the payment of a stock dividend during October 1997. Greenbelt has purchased 544,730 Common Shares by exercising some of those warrants at prices ranging from \$1.93 to \$2.35 per share. Greenbelt continues to hold warrants, expiring during April and June 2002, to purchase an aggregate of 155,636 Common Shares at price ranging from \$13.75 to \$15.74. The other warrants have expired unexercised.

During April 1998, the Company entered into a new financial advisory services agreement with Greenbelt. The new agreement provided for an initial payment of \$90,000 followed by an advisory fee of \$15,000 per month paid quarterly. The Company agreed to reimburse Greenbelt for all reasonable out-of-pocket expenses incurred in connection with its engagement as financial advisor, and to indemnify Greenbelt and its officers, affiliates, employees, agents, assignees, and controlling person from any liabilities arising out of or in connection with actions taken on BioTime's behalf under the agreement. The agreement has been renewed twice and will expire on March 31, 2002, but instead of paying cash compensation, the Company agreed to issue Greenbelt 30,000 Common Shares in four quarterly installments of 7,500 shares each for the twelve months ended March 31, 2001, and 40,000 Common Shares in four quarterly installments of 10,000 each for the twelve months ended March 31, 2002.

During March 2001, the Company entered into a Line of Credit Agreement with Alfred D. Kingsley under which Mr. Kingsley agreed to lend the Company \$1,000,000. In consideration of Mr. Kingsley's agreement to provide that line of credit, the Company issued to him a warrant to purchase 50,000 Common Shares at an exercise price of \$8.31 per share. The warrant will expire in five years. The exercise price and number of Common Shares for which the warrant may be exercised are subject to adjustment to prevent

dilution in the event of a stock split, combination, stock dividend, reclassification of shares, sale of assets, merger or similar transaction.

During August 2001, the Company received loans of \$3,350,000 through the sale of debentures to a group of private investors, including Mr. Kingsley, who purchased \$1,500,000 of debentures, and Milton Dresner, a director of the Company. Mr. Kingsley's investment included the conversion of the \$1,000,000 principal balance of the line of credit that he had previously provided.

Interest on the debentures is payable at an annual rate of 10% and is payable semiannually. The principal amount of the debentures will be due and payable on August 1, 2004. BioTime may prepay the debentures, in whole or in part, at any time without premium or penalty. Under the terms of the debentures, BioTime has agreed that commencing October 1, 2001 it will restrict its quarterly cash payments for operating expenses to not more than \$450,000 (excluding interest payable on the debentures) plus the amount of cash revenues (excluding interest and dividends) it collects for the quarter. To the extent BioTime's expenditures during any quarter are less than \$450,000 over its revenues, it may expend the difference in one or more subsequent quarters. That restriction will expire when BioTime obtains at least \$5,000,000 in cash through sales of equity securities or pays off the debenture indebtedness in full. For this purpose, cash revenues will include royalties, license fees, and other proceeds from the sale or licensing of its products and technology, but will not include interest, dividends, and any monies borrowed or the proceeds from the issue or sale of any debt or equity securities. BioTime has also agreed not to declare or pay any cash dividends on its capital stock or to redeem or repurchase any shares of its capital stock, until it has paid off the debenture indebtedness in full.

Investors who purchased the debentures also received warrants to purchase a total of 515,383 common shares at an exercise price of \$6.50 per share. The warrants will expire if not exercised by August 1, 2004. The Company has the right to call the warrants for redemption at a redemption price of \$0.01 per share if the closing price of the Company's Common Shares on the American Stock Exchange equals or exceeds 150% of the exercise price for fifteen (15) consecutive trading days and the shares issuable upon the exercise of the warrants have been registered for sale under the Securities Act of 1933, as amended (the "Act").

The Company has registered for sale under the Act, the warrants and Common Shares described above, including Common Shares that may be issued upon the exercise of the warrants or in installments under the financial advisory agreement. The Company also included in the registration 300,000 Common Shares that Mr. Kingsley acquired during December 2000 from certain BioTime officers and directors. The Company paid the expenses of registration, but will not be obligated to pay any underwriting discounts or commissions that may be incurred by Greenbelt, Mr. Kingsley, or Mr. Dresner in connection with any sale of the warrants or Common Shares.

During March 2002, the Company entered into a new Credit Agreement with Alfred D. Kingsley. In consideration of Mr. Kingsley's agreement to provide that line of credit, the Company issued to him a warrant to purchase 30,000 Common Shares at an exercise price of \$4.00 per share. The warrant will expire in five years. The exercise price and number of Common Shares for which the warrant may be exercised are subject to adjustment to prevent dilution in the event of a stock split, combination, stock dividend,

reclassification of shares, sale of assets, merger, or similar transaction. The Company has agreed to register the shares issuable under the warrant for sale under the Act, upon request, on substantially the same terms as the registration of the warrants issued under the Company's consulting agreement with Greenbelt.

**Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.**

The following table sets forth information as of March 1, 2002 concerning beneficial ownership of Common Shares by each shareholder known by the Company to be the beneficial owner of 5% or more of the Company's Common Shares, and the Company's executive officers and directors. Information concerning certain beneficial owners of more than 5% of the Common Shares is based upon information disclosed by such owners in their reports on Schedule 13D or Schedule 13G.

	<u>Number of Shares</u>	<u>Percent of Total</u>
Alfred D. Kingsley (1) Gary K. Duberstein Greenbelt Corp. Greenway Partners, L.P. Greenhouse Partners, L.P. 909 Third Avenue, 30th Floor New York, New York 10022	2,015,252	16.4%
Paul and Judith Segall (2)	645,408	5.6%
Harold D. Waitz (3)	424,166	3.6%
Hal Sternberg	214,907	1.8%
Ronald S. Barkin (4)	176,861	1.5%
Steven Seinberg(5)	24,000	*
Jeffrey B. Nickel (6)	45,000	*
Milton H. Dresner (7)	70,206	*
Katherine Gordon (8)	15,000	*
All officers and directors as a group (9 persons)(9)	1,615,548	13.6%

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\* Less than 1%

- (1) Includes 155,636 Common Shares issuable upon the exercise of certain warrants owned beneficially by Greenbelt Corp, 674,460 Common Shares owned by Greenbelt Corp., 90,750 Common Shares owned by Greenway Partners, L.P., 772,742 Common Shares owned solely by Alfred D. Kingsley, 310,769 Common Shares issuable upon the exercise of certain warrants owned solely by Mr. Kingsley, and 10,895 Common Shares owned solely by Gary K. Duberstein. Alfred D. Kingsley and Gary K. Duberstein control Greenbelt Corp. and may be deemed to beneficially own the warrants and shares that Greenbelt Corp. beneficially owns. Greenhouse Partners, L.P. is the general partner of Greenway Partners, L.P., and Mr. Kingsley and Mr. Duberstein are the general partners of Greenhouse Partners, L.P. Greenhouse Partners, L.P., Mr. Kingsley, and Mr. Duberstein may be deemed to beneficially own the shares that Greenway Partners, L.P. owns. Mr. Duberstein disclaims beneficial ownership of the shares and warrants owned solely by Mr. Kingsley, and Mr. Kingsley disclaims beneficial ownership of the shares owned solely by Mr. Duberstein.
- (2) Includes 443,245 shares held of record by Paul Segall and 202,163 shares held of record by Judith Segall.
- (3) Includes 2,100 shares held for the benefit of Dr. Waitz's minor children.
- (4) Includes 90,000 Common Shares issuable upon the exercise of certain options.
- (5) Includes 24,000 Common Shares issuable upon the exercise of certain options.
- (6) Includes 45,000 Common Shares issuable upon the exercise of certain options.
- (7) Includes 30,000 Common Shares issuable upon the exercise of certain stock options, and 15,384 Common Shares issuable upon the exercise of certain warrants. Does not include Common Shares that Mr. Dresner may acquire in lieu of cash payment of his director's fees.
- (8) Includes 15,000 Common Shares issuable upon the exercise of certain options.
- (9) Includes 219,384 Common Shares issuable upon the exercise of certain options and warrants.

#### **COMPLIANCE WITH SECTION 16(a) OF THE SECURITIES EXCHANGE ACT OF 1934**

Section 16(a) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), requires the Company's directors and executive officers and persons who own more than ten percent (10%) of a registered class of the Company's equity securities to file with the Securities and Exchange Commission (the "SEC") initial reports of ownership and reports of changes in ownership of Common Shares and other equity securities of the Company. Officers, directors and greater than ten percent beneficial owners are required by SEC regulation to furnish the Company with copies of all reports they file under Section 16(a).

To the Company's knowledge, based solely on its review of the copies of such reports furnished to the Company and written representations that no other reports were required, all Section 16(a) filing requirements applicable to its officers, directors and greater than ten percent beneficial owners were complied with during the fiscal year ended December 31, 2001, except that Steven Seinberg, Chief Financial Officer, was late in filing a Form 3 and a Form 4.

## PART IV

### Item 14. Exhibits, Financial Statement Schedules and Reports on Form 8-K

#### (a-1) Financial Statements.

The following financial statements of BioTime, Inc. are filed in the Form 10-K:

	<u>Page</u>
Independent Auditors' Report	36
Balance Sheets As of December 31, 2001 and December 31, 2000	37
Statements of Operations For the Years Ended December 31, 2001, December 31, 2000 and December 31, 1999, and the Period From Inception (November 30, 1990) to December 31, 2001	38
Statements of Shareholders' Equity For the Years Ended December 31, 2001, December 31, 2000 and December 31, 1999, and the Period From Inception (November 30, 1990) to December 31, 2001	39-41
Statements of Cash Flows For the Years Ended December 31, 2001, December 31, 2000 and December 31, 1999, and the Period From Inception (November 30, 1990) to December 31, 2001	42-43
Notes to Financial Statements	44-55

#### (a-2) Financial Statement Schedules

All schedules are omitted because the required information is inapplicable or the information is presented in the financial statements or the notes thereto.

(a-3) Exhibits.

<u>Exhibit Numbers</u>	<u>Description</u>
3.1	Articles of Incorporation, as Amended.†
3.3	By-Laws, As Amended.#
4.1	Specimen of Common Share Certificate.+
10.1	Lease Agreement dated July 1, 1994 between the Registrant and Robert and Norah Brower, relating to principal executive offices of the Registrant.*
10.2	Intellectual Property Agreement between the Company and Paul Segall.+
10.3	Intellectual Property Agreement between the Company and Hal Sternberg.+
10.4	Intellectual Property Agreement between the Company and Harold Waitz.+
10.5	Intellectual Property Agreement between the Company and Judith Segall.+
10.6	Intellectual Property Agreement between the Company and Steven Seinberg.**
10.7	Agreement between CMSI and BioTime Officers Releasing Employment Agreements, Selling Shares, and Transferring Non-Exclusive License.+
10.8	Agreement for Trans Time, Inc. to Exchange CMSI Common Stock for BioTime, Inc. Common Shares.+
10.9	1992 Stock Option Plan, as amended.##
10.10	Intellectual Property Agreement between the Company and Ronald S. Barkin.^
10.11	Addenda to Lease Agreement between the Company and Donn Logan.‡
10.12	Exclusive License Agreement between Abbott Laboratories and BioTime, Inc. (Portions of this exhibit have been omitted pursuant to a request for confidential treatment).###
10.13	Modification of Exclusive License Agreement between Abbott Laboratories and BioTime, Inc. (Portions of this exhibit have been omitted pursuant to a request for confidential treatment).^^^
10.14	Revolving Line of Credit Agreement, dated March 27, 2001, between BioTime, Inc. and Alfred D. Kingsley††
10.15	Warrant Agreement, dated March 27, 2001, between BioTime, Inc. and Alfred D.Kingsley††
10.16	Form of Series 2001-A 10% Debenture due August 1, 2004‡‡
10.17	Warrant Agreement between BioTime, Inc. and Purchasers of Series 2001-A Debentures‡‡

10.1 Revolving Line of Credit Agreement, dated March 27, 2002, between BioTime, Inc. and Alfred D. Kingsley#####

10.19 Warrant Agreement, dated March 27, 2002, between BioTime, Inc. and Alfred D. Kingsley####

23.1 Consent of Deloitte & Touche LLP\*\*\*

† Incorporated by reference to the Company's Form 10-K for the fiscal year ended June 30, 1998.

+ Incorporated by reference to Registration Statement on Form S-1, File Number 33-44549 filed with the Securities and Exchange Commission on December 18, 1991, and Amendment No. 1 and Amendment No. 2 thereto filed with the Securities and Exchange Commission on February 6, 1992 and March 7, 1992, respectively.

# Incorporated by reference to Registration Statement on Form S-1, File Number 33-48717 and Post-Effective Amendment No. 1 thereto filed with the Securities and Exchange Commission on June 22, 1992, and August 27, 1992, respectively.

\* Incorporated by reference to the Company's Form 10-K for the fiscal year ended June 30, 1994.

^ Incorporated by reference to the Company's Form 10-Q for the quarter ended March 31, 1997.

## Incorporated by reference to Registration Statement on Form S-8, File Number 333-30603 filed with the Securities and Exchange Commission on July 2, 1997.

^^ Incorporated by reference to the Company's Form 10-Q for the quarter ended March 31, 1999.

### Incorporated by reference to the Company's Form 8-K, filed April 24, 1997.

^^^ Incorporated by reference to the Company's Form 10-Q for the quarter ended June 30, 1999.

‡ Incorporated by reference to the Company's Form 10-K for the year ended December 31, 1999.

†† Incorporated by reference to the Company's Form 10-K for the year ended December 31, 2000.

‡‡ Incorporated by reference to the Company's Form 10-Q for the quarter ended June 30, 2001.

\*\*\* Filed herewith.

#### Previously filed.

(b) Reports on Form 8-K

The Company did not file any reports of Form 8-K for the three months ended December 31, 2001.



## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized on the 14th day of May 2002.

BIOTIME, INC.

By: /s/Paul E. Segall  
 Paul E. Segall, Ph.D.  
 Chairman and Chief Executive  
 Officer (Principal executive  
 officer)

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/Paul E. Segall</u> Paul E. Segall, Ph.D.	Chairman, Chief Executive Officer and Director (Principal Executive Officer)	May 14, 2002
<u>Ronald S. Barkin</u>	President and Director	May 14, 2002
<u>/s/Harold D. Waitz</u> Harold D. Waitz, Ph.D.	Vice President and Director	May 14, 2002
<u>/s/Hal Sternberg</u> Hal Sternberg, Ph.D.	Vice President and Director	May 14, 2002
<u>/s/Steven Seinberg</u> Steven Seinberg	Chief Financial Officer (Principal Financial and Accounting Officer)	May 14, 2002
<u>/s/Judith Segall</u> Judith Segall	Vice President, Corporate Secretary and Director	May 14, 2002
<u>/s/Jeffrey B. Nickel</u> Jeffrey B. Nickel	Director	May 14, 2002
<u>Milton H. Dresner</u>	Director	May 14, 2002
<u>Katherine Gordon</u>	Director	May 14, 2002

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## DIRECTORS AND OFFICERS

### **Paul Segall, Ph.D.**

Chairman and Chief Executive Officer,  
Director

### **Steven A. Seinberg, J.D.**

Chief Financial Officer and Treasurer

### **Hal Sternberg, Ph.D.**

Vice President of Research, Director

### **Harold D. Waitz, Ph.D.**

Vice President of Engineering & Regulatory  
Affairs, Director

### **Judith Segall**

Corporate Secretary, Vice President of  
Technology, Director

### **Milton H. Dresner**

Principal - Milton Dresner Investments,  
Director

### **Katherine Gordon, Ph.D.**

Senior Vice President - MitoKor, Inc., Director

### **Jeffrey B. Nickel, Ph.D.**

President - Nickel Consulting, Director

## CORPORATE INFORMATION

### **Corporate Headquarters**

935 Pardee Street  
Berkeley, CA 94710

(510) 845-9535

(510) 845-7914 Fax

[www.biotimeinc.com](http://www.biotimeinc.com)

### **Independent Auditors**

Deloitte & Touche LLP  
50 Fremont Street, San Francisco, CA  
94105

### **Legal Counsel**

Lippenberger, Thompson, Welch,  
Soroko & Gilbert LLP  
555 California Street, San Francisco, CA  
94104

### **Registrar & Transfer Agent**

American Stock Transfer & Trust Co.  
59 Maiden Lane, New York, NY  
10038

## SCIENTIFIC ADVISORY BOARD

### **Jeffrey S. Freed, M.D.**

Chairman, Associate Clinical Professor of  
Surgery- Mount Sinai College of Medicine,  
New York, NY

### **Eugene M. Breznock, D.V.M., Ph.D.**

Professor Emeritus of Surgery  
Director of Research  
School of Veterinary Medicine  
University of California at Davis, Davis, CA

Director of Research

BioSurg, Inc., Winters, CA

### **Harry J. Buncke, M.D.**

Director, Microsurgical Replantation  
Transplantation Service - California Pacific  
Medical Center - Davies Campus San  
Francisco, CA

### **Paul Cianci, M.D.**

Director, Department of Hyperbaric  
Medicine Doctors Medical Center, San  
Pablo, CA, John Muir Medical Center,  
Walnut Creek, CA and St. Francis Memorial  
Hospital, San Francisco, CA

### **Roger Jacobs, Ph.D.**

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of Surgery SUNY Downstate Medical  
Center, Brooklyn, NY and New York Medical  
College, Valhalla, NY

### **Lester Packer, Ph.D.**

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University of California at Berkeley  
Berkeley, CA

### **Lewis G. Shepler, II, M.D., FACEP**

Emergency Services  
John Muir Hospital  
Walnut Creek, CA

### **Paola S. Timiras, M.D., Ph.D.**

Professor Emerita  
University of California at Berkeley  
Berkeley, CA

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